COVID-19, Commencement ’20

Tercentenary Theatre,
May 28, 2020

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On the cover: Photograph by Kristina DeMichele
A Note to Readers
We hope that you are safe and well—and that by the time this issue is posted online and reaches your mailbox, humanity will have made significant progress in reducing the baleful effects of the coronavirus (due in part to the contributions of Harvard scientists; see page 18).

Three things to note about the July-August Harvard Magazine. First, and unsurprisingly, “The Risks of Homeschooling” (May-June, page 10) attracted many comments, mostly critical. We publish a sample in the letters columns. Many were much longer than the article itself; we could not nearly print them all and accommodate diverse perspectives, so we refer you to the online issue to sample more, at length.

Second, some of our contents are constrained by the pandemic. For instance, coverage of the tercentenary of Massachusetts Hall, and what it has come to mean to the community (page 14), was conceived as a feature, accompanied by some of the marvelous letters, official records, drawings, and artifacts in the University Archives, graciously rounded up by Ross Mulcare, archivist for outreach, research, instruction, and special projects; graduate assistant Natalie Malter; and colleagues. Having whetted our appetites, they and we were disappointed that the campus closure derailed plans to scan these materials to share with you. When conditions permit, we will work with these superb professionals to present a portfolio online, and in a future issue will share directions on how to access it.

Third, this issue is thinner than we would like. Commencement—always a significant part of July-August coverage—was reduced to a virtual degree-conferring ceremony this year (page 16). But economics played a role, too: in the devastating economic wake of COVID-19, our advertising partners are managing their expenses with special care. We in turn are being careful to husband the magazine’s resources (as the University must manage its budget: page 21), the better to serve you in the long run. Please enjoy this issue, and follow the extensive, continuing coverage of essential Harvard news at www.harvardmagazine.com.

~John S. Rosenberg, Editor

HOMESCHOOLING
Professor Elizabeth Bartholet believes homeschooling should be presumptively banned (“The Risks of Homeschooling,” May-June, page 10). By every metric, she would have outlawed my family. My dad was a high-school dropout. My mom attended one year of college. They decided to homeschool out of deeply held religious beliefs. We had no television and went to the doctor and dentist only rarely.

And yet my childhood was wonderful. Education was woven into everything we did. My parents never missed an opportunity for instruction. They wanted their children to love learning, and there was never a shortage of opportunities beyond our formal curriculum. We spent endless hours exploring the woods around our house—or inside reading books. In high school my homeschooled friends and I put on plays, entered music competitions, and traveled the country for debate tournaments. My twin brother and I started a youth-targeted non-profit, hosting conferences and publishing a best-selling book before college.

~Bryan E. Simmons ’83

Cambridge 02138
Health care, St. Louis, pioneering astronomer
Unprecedented

When people who are steeped in our institutional history hear the word “unprecedented,” they are understandably skeptical. There isn’t much that hasn’t happened at the University at one point or another over the past 383 years, and our Class of 2020 is not the first group of graduates unsettled by crisis. Had this year progressed in the usual way, I would have just welcomed back to Harvard Yard the members of our fiftieth reunion class. Their senior year unfolded on a campus roiled by protest and occupation, culminating in nationwide unrest in the wake of the Kent State tragedy.

Military and social conflict, natural disasters and public health crises, economic recession and depression: Harvard has borne everything that has made the world what it is since 1636. When it became clear in March that humanity might be headed toward pandemic, the experts in our University Archives, ever mindful of the tendency toward collective amnesia, sprang into action. They combed through University records and catalogued the various conflicts and crises that resulted in atypical or arrested semesters, as well as abbreviated or cancelled commencement festivities.

I keep their summary handy for days when the duties of my position are taxing in ways I never could have anticipated. In especially difficult moments, which are blessedly rare, I give myself time to reflect on some of the things that challenged my predecessors. Smallpox, as it happens, has no equal in duration or level of disruption—it plagued the University over centuries. When faculty and students in the 18th century weren’t coping with the myriad challenges of colonial life or a war for independence, they faced outbreaks that extended University holidays, turned public events into private affairs, and upended—and ended—campus life. In 1730, the President and Fellows resolved to recall students who had been “dispersed...for fear of ye smallpox then in Cambridge,” and my predecessor Benjamin Wadsworth relied upon the public newspapers to disseminate his message throughout the Commonwealth.

Not surprisingly, a member of the Harvard faculty played an extraordinary role in halting the spread of smallpox in the United States. In 1800, relief was ushered in at the hands, quite literally, of one of three founding members of the Harvard Medical School. Dr. Benjamin Waterhouse, Professor of Theory and the Practice of Physic, witnessed the scourge of “the devouring monster,” as he called it, and was keen to embrace vaccination, a practice developed and advanced in England by Dr. Edward Jenner. A transatlantic correspondence led to Jenner’s sending cowpox vaccine matter to Waterhouse, which he promptly used to vaccinate his four children and two of the family’s servants. His experiment became the subject of A Prospect of Exterminating the Small-Pox, a pamphlet that disseminated his findings widely and encouraged the use of the vaccine across the country.

In 1980, the 33rd World Health Assembly declared smallpox eradicated world-wide. Today, in the quiet of the Countway Library at Harvard Medical School, there sits a small silver snuffbox sent from Jenner to Waterhouse—a token of appreciation and affection, and a symbol of a global partnership that revolutionized medicine and public health. As I learn about efforts at Harvard and by Harvard alumni to speed vaccines, treatments, and cures for COVID-19, I imagine what kinds of tokens will be exchanged when we have overcome our own particular monster. Until then, my burdens are lightened by our shared history. Knowledge has prevailed in the past; knowledge will prevail again.

Sincerely,

[Signature]
I’m the first person in my family to attend law school. I was accepted to Harvard, I believe, on the strength of accomplishments that were only possible because my parents chose to homeschool. Like other homeschool graduates before and since, I thrived. I was named an editor of the Harvard Law Review, was awarded the Sears Prize, and secured clerkships with then-Judge Gorsuch and Justice Kennedy after graduation.

I’m one of many such stories. My fellow homeschool graduates are some of the most intelligent, responsible, caring, and well-rounded people I know, making the world a better place from boardrooms to living rooms, small business to big law.

Homeschooling is not perfect and my own experience was far from it. But imperfections are not unique to homeschooling. There are risks to sending your children to public, private, or parochial schools. Unfortunately, it appears Bartholet singles out homeschooling based on her mistaken belief that it is driven by “conservative Christian beliefs” of which she disapproves.

As for this homeschool graduate, I can only express my gratitude that the educational choices made for me were made by the two people in this world who knew me best, who loved me most, and who sincerely wished the very best for me and my siblings.

ALEX J. HARRIS, J.D. ’15
Denver

WHAT A disappointing, uninformed article. My wife and I have homeschooled our kids for large parts of their education. They have excelled in college and have graduate degrees. They are independent thinkers and broad learners. Our family is close and dedicated to each others’ happiness and the health of our society. I myself have spent many years dedicated to litigating for the rights of victims of abuse. I am surprised that the magazine gave a forum to ideas that have been discredited for at least 30 years.

DAVID VICINANZO ’81
Concord, N.H.

The article did not convince me that a presumptive ban should be placed on the practice, but I agree that periodic testing by the state to evaluate progress is necessary.

The article showed a disdain for and a lack of understanding of Christianity, made blanket statements supported by singular examples, did not mention any research on how well homeschoolers adapt and turn out in life, and made the preposterous and unsubstantiated assumption that homeschooling threatens our democracy.

I would also like to point out that the German ban on homeschooling originated with the 1919 Weimar Constitution but was reinforced in 1938 by the Nazis, who effectively banned homeschooling with criminal consequences and is one of the few Nazi laws still enforced in Germany today. Also, the idea that “powerful” parents are more of a threat to children than powerful governments reflects authoritarian statism thinking which is definitely a threat to our democracy.

If Bartholet’s treatise on homeschooling represents current scholarship at Harvard, I am deeply saddened. Perhaps she should speak to William J. Fitzsimmons, dean of admissions and financial aid, who is quoted as saying, “homeschooling is an educational asset Harvard considers favorably when making its admission decisions.”

RON DUGAN, M.B.A ’67
Spokane

I would like to thank Erin O’Donnell and Elizabeth Bartholet for creating a new conversation about homeschooling. My parents made the decision to homeschool me through a Catholic correspondence school, Seton School, based in Front Royal, Virginia. While I received a decent education, partly because my parents are both well educated, I was not prepared for life at a university, or life in general. Without going into detail, it took many years for me to deal with the consequences and difficulties this presented.

My fellow homeschool graduates are some of the most intelligent, responsible, caring, and well-educated people I have ever met. Their decision to homeschool was clearly a positive one for them and their families. Our family is close and dedicated to each others’ happiness and the health of our society. I myself have spent many years dedicated to litigating for the rights of victims of abuse. I am surprised that the magazine gave a forum to ideas that have been discredited for at least 30 years.
Lessons Learned?

What has the University discovered about itself from its exposure to the coronavirus? It may seem premature to speculate just a few months after the campus community largely dispersed. Yet there are apparent contradictions, important to sort out, between focusing on Harvard’s needs versus emphasizing cooperation with peer institutions as higher education faces frightening challenges.

• Respect the past: In late 2008, when recession ravaged the endowment and other financial decisions soured, the University faced a liquidity crisis, and borrowed $2.5 billion, at high interest, to pay its bills. Those unforeseen risks in financial management and shortcomings in oversight prompted governance reforms, unveiled in late 2010, meant to enhance performance of the Corporation’s fiduciary responsibilities.

When the current economic calamity unfolded, the University had ample liquid funds on hand (see harvardmag.com/virus-fiscal-hit-20). In fact, Harvard had bolstered its cash position last fall, anticipating a recession (just not this one), and maintained multiple backup sources for further liquidity if needed. The lessons have been learned: in this regard, the governance reforms and changes in financial administration worked.

• Act fast: As President Lawrence S. Bacow has explained (harvardmag.com/bacow-on-pandemic-20), once faculty experts made the pandemic’s risks clear, he and other University leaders immediately prepared to shift to remote teaching and empty the campus to safeguard community health.

Bacow may also move swiftly to make the near-term financial adjustments Harvard faces in light of a diminished endowment (distributions from which are the largest source of operating revenues); lost income from extension and continuing education; deferred research; and the costs of the steps needed to resume residential classes and research. As Tufts president, he outlined the impact of the 2008 financial crisis that October and November—and balanced the budget within the fiscal year ("The Pragmatist," September-October 2008, page 32). Tufts, admittedly, was and is significantly less endowment-dependent than Harvard. The University’s immediate budgetary blues are consequential (see page 21), but some are temporary concerns. Team Bacow seems inclined to have deans take their medicine now, and look toward the future sooner.

The reduced endowment distribution and new assessment announced in early June are a downpayment (see harvardmag.com/covid-onlineschools-distributiondown-20). Furloughs and layoffs are likely next.

These steps suggest how 2020 differs from 2008. Both affected Harvard’s finances, but the educational impact of social distancing from a residential university is potentially transformative. All the more reason to begin dealing with what lies ahead.

• Identifying opportunities. Preparedness means being able to seize opportunities. Harvard’s recession planning spoke of identifying “areas for investment and growth. Creating capacity…in advance of a downturn can enable the organization to…”play offense” during times of constraint. The ability to hire faculty or invest in emerging fields of study can better position Harvard for future success”—especially if other institutions are hamstringed.

Bacow, a runner, said “races are won on the uphill,” when others are winded.

One concern is that the Faculty of Arts and Sciences (FAS), in particular, hasn’t been able to do anything like that. In the past dozen years, it has invested heavily in financial aid and fixing up the undergraduate Houses—important priorities, to be sure. But its faculty census has remained unchanged. The disciplinary mix has shifted toward engineering and applied sciences, and there are plenty of new faces. But more scholars in more new fields in which to do Harvard-quality research would be even better. So it was discouraging to read in Dean Claudine Gay’s April 15 message that almost all current faculty searches had been suspended, and “new searches will not be authorized.”

After 9/11, the Great Recession, and now the pandemic, the Corporation’s highest fiduciary responsibility may well be to guard against catastrophes every decade: rein in spending (as in the past few years), and fighting to maintain at least the Harvard that exists today. But that is a worrisome definition of “playing offense”—for a world desperate for new ideas and breakthroughs, and for an institution designed to foster them.

• Going big. Given those caveats, it may seem obtuse to suggest that Harvard aim larger. But the 2010 governance reforms had two aims: to enhance the Corporation’s fiduciary oversight and to create space for strategic thinking. The need for the latter (especially when immediate concerns loom so large) is greater than ever—perhaps beyond any one institution acting alone.

As noted, even in a benign economic decade, FAS had trouble expanding. Bacow, while fully attentive to Harvard, has also been generous in talking about all of higher education. He champions partnerships with peers like MIT and Boston University on matters ranging from faculty or graduate-student housing to quantum-science research. And he constantly emphasizes the importance of the local biomedical/biotechnology ecosystem of universities, hospitals, research institutes, and private enterprises—productive collaborators in attacking COVID-19.

With many schools’ return to residential teaching and research delayed, Harvard will feel the pain—but large public and smaller private schools may be crippled. If foreign students cannot enroll, the challenges multiply. This applies across higher education, at a time when its services are essential.

So perhaps now the highest priority for Harvard is not playing offense, but extending the notion of partnership to like institutions in Greater Boston—beyond single-purpose entities such as the Broad Institute (the Harvard-MIT genomics-research shop). All nearby universities will struggle to fulfill their core missions: hiring faculty; maintaining laboratories and libraries; investing in remote and online learning; and straining to advance as they retool for a new era of constraint. The core mission will be squeezed across the board.

From its hard-won position of relative financial strength and continuing academic prowess, the University is uniquely placed to be a foresighted academic partner and collaborator: advancing Boston not just as a biotech center, but as a higher-education mecca. (One thinks of the collaboration among the University of Massachusetts, Amherst and nearby colleges.) If Harvard were to encourage such a research-university-level cluster, it might usefully inspire similar clusters elsewhere.

The University has survived a sometimes-punishing start to this millennium. Today, much of higher education may not. To continue to survive, and to create that “capacity” to thrive on society’s behalf, might mean moving beyond leading any one institution to win “on the uphill.” During the past decade, Harvard improved its governance and financial management to good effect. Now it has been presented with an opportunity—even an imperative—to see if it can perform at an equally high level strategically, to advance teaching and discovery as a whole, in a fraught era. ~John S. Rosenberg, Editor
sequences of being isolated as a child. At 41, there are still some issues I struggle with, but I am conquering these with the help of therapy and a supportive partner.

I hope that Bartholet’s work will help children grow up to be happy and healthy adults, who can make positive contributions to the world.

P.Z.
West Hollywood, Calif.

Bartholet’s views are a smear of all homeschoolers with derogatory references to “child abuse,” “authoritarian control” by parents, and to “some” of them who “question science” (isn’t science all about questioning?) and “promote female subservience and white supremacy”—stereotyping that thoughtful people avoid.

She wants homeschoolers banned or made to provide an education “equivalent to that required in public schools,” to impose conformity to government standards on a tiny movement with only 3 or 4 percent of all U.S. school-age children. We cannot tolerate this tiny amount of diversity!

Public school is all about uniformity: children segregated into strict age-groups, teacher-student ratios that stop most personal contact, standardized textbooks and tests for each grade level, readings authored by no-names for specific levels of English comprehension, all putting U.S. literacy scores at around average, with many countries doing better (National Center for Education Statistics). There’s no stretching of brains, such as when our three-and-a-half-year-old granddaughter listened raptly to a classic folk tale we read to her (via Zoom) with half the language above her “level.”

For 10 years, we homesteaded in rural Maine and ran a small private elementary school for our three sons and a few others. Among many things, we read children’s classics aloud to all, had them draw pictures to their sentences, and wrote one-act musical comedies with a good role for each student, rehearsing them meticulously and having them perform publicly. With this very unpublic-school education, our three sons went to Harvard and MIT.

Lenore Monello Schloming ’59
Skip Schloming, Ph.D.
Cambridge

We don’t typically think of Harvard Magazine as promoting racial and religious stereotypes, so the illustration for the article shocked and saddened us. As a homeschool graduate and teacher respectively, we know it is untrue to caricature us as Caucasian Bible-bashers who imprison children inside. The National Center for Education Statistics, an agency affiliated with the U.S. Department of Education, found in a September 2019 survey that the two primary reasons Americans chose to homeschool were not directly related to any faith commitments. Counter to the ominous suggestions of the Bible figured in your cartoon, parents chose to homeschool their children because of concerns that the local-school environment did not suit their children and because of the quality of academics. In 2017, 40 percent of American homeschoolers did not identify as white.

As for being imprisoned inside, this is a patent misrepresentation. Benjamin and his brother Jonathan spent the great majority of their homeschool lives in the fresh air, whether doing homework or class outside, or at a variety of meaningful jobs and volunteering posts. Massachusetts’s enlightened homeschool code even allows students to be anywhere in the world during the school year—starting in tenth grade, Benjamin spent four weeks each academic year in China, living with a family and studying Mandarin, freeing up the summer for other pursuits.

This is a lifestyle seen by “schoolschooled” young people as remarkably free and empowering. We cannot count the number of times we have been told by such students that they would infinitely rather choose an educational option offering unrestricted freedom of movement; remarkable agency in pursuing customized learning goals and developing skills to high levels; and the respect and dignity due a unique individual with unique hopes, aspirations, and dreams. The homeschoolers we know look like the joyful children running around outside the house: excited to engage with their peers and the world around them, and committed to making a positive difference. To portray them as prisoners—in a house made of books no less—is a tragically ludicrous perversion of reality.

Benjamin Porteous ’22
Dr. Rebecca Porteous ’87
Arlington, Mass.

The article does grave disservice to the subject it is treating and to balanced and sober inquiry.

A picture opens the article with kids playing gleefully outside, while a homeschool girl sits sullen and lonely as she looks out from behind a barred window. The reality is any bars are on the windows and round the perimeters of our public schools, behind which walls children sit for several hours a day.

There is no serious probe to any shortcomings of public education that it should experience an increasing exodus. [Bartholet] merely paints the 90 percent who have left as a Ruby Ridge fundamentalist breeding ground of anti-science, misogyny, and white supremacy.

It is asserted that homeschooling not only violates children’s “right to be protected from potential child abuse, but may keep them from contributing positively to a democratic society.” Regarding the former, one need only think of the viral videos of school fights and bullying on the bus, not to mention mass shootings. As to their being kept “from contributing positively to a democratic society,” simply look up how many U.S. presidents were home schooled.

We go on to read that “requiring children to attend schools outside the home for six or seven hours a day...does not un-
duly limit parents’ influence on a child’s views and ideas.” This cannot blithely be reduced to giving up a bit of time. This is a question of conceding the whole of their formal education.

Finally, public education is touted as being of higher quality and breadth in scope. Justify this against drop-out rates and rampant core-subject illiteracy. In turn, examine the homeschool record of academic excellence.

The arguments are spun quite nearly out of whole, monochromatic cloth.

DAVID BROOKS
Charlotte, N.C.

AS A HARVARD GRAD and a mother who homeschooled my four children for portions of their K-12 years, I found Bartholet’s beliefs about the dangers of homeschooling to be alarming. Our system of rights is based on natural law, which exists apart from the modern state. The primary job of the latter is to safeguard our rights, including that of parents to raise their children as they see fit. Yet Bartholet seems to view parents’ decision to homeschool as suspect, even rebellious! The tail now wags the dog.

The state is supposedly answerable to the people. However, with respect to compulsory education, parental rights have withered in favor of the bureaucratic stranglehold teachers unions now have over basic curricula and the social engineering masquerading as lessons in democracy that is increasingly the goal of the public-school system. From my experience of sending my children to public school, intellectual curiosity dies on the altar of mind-numbing assembly lines of busywork. There are good teachers, but I believe the system and methodology are counter-productive. While exposure to many viewpoints occurs, usually without sufficient critique, the only viewpoints not tolerated are traditional ones. There are legitimate reasons why Christians, and other independent thinkers, homeschool. Their efforts should be applauded.

The real danger to democracy is the current system, with its push to mold students in the monolithic image of elites, our self-appointed philosopher-kings. Yet Bartholet ascribes to the government the mission of protecting “powerless” children from their “powerful” parents, ignoring the overweening power that the state and teachers unions exercise over both. To preserve freedom of thought and crit-

(please turn to page 63)
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Sofra Bakery & Café
Greater Boston’s Season of “Social Trust”

Getting away and outside safely this summer
by NELL PORTER BROWN

In late May, Harvard T.H. Chan School of Public Health assistant professor Joseph Allen put it bluntly: “This is going to be a very different summer.”

Even as many parks and preserves that closed in the early days of the COVID-19 pandemic began reopening this spring, visitor access came with strict protocols designed not only to prevent viral spreading, but also to protect natural areas from damage caused by overcrowding. Further reopenings throughout the summer depend on visitors’ willingness to abide by the new rules. “Importantly, the burden is not just on parks and park rangers, but it’s also on people. And to get through this, it’s going to take a great deal of social trust,” Allen repeatedly emphasized during a press briefing after the release of Massachusetts governor Charlie Baker’s cautious, multi-phased reopening plan. “We should view going to parks and other activities that are starting to reopen as a privilege,” Allen added, “which can quickly be revoked.”

Like many conservation organizations, Mass Audubon kept its sites open early in

“We had a lot of visitors using sites as recreation areas,” reports Gail Yeo, vice president for wildlife sanctuaries and programs. People brought dogs, even where they are prohibited. Parked cars spilled out of lots, illegally jamming public roads. Landscapes outside the designated trails were being trampled—or used as rest rooms. “People were just really exploring in a way that was kind of exciting,” says Yeo, “but completely out of control.”

But she expected that most of the non-profit’s 57 public sanctuaries would be reopened by mid June, with some, like the...
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more popular Broadmoor, in Natick, and Ipswich River, in Topsfield, requiring advance day-of-visit online reservations to control the influx of visitors. Other properties that have already reopened, and do not require reservations, provide easy day-outings from Boston. Explore natural habitats and six miles of trails at Flat Rock Wildlife Sanctuary, in Fitchburg, which abuts the separate Crocker Conservation Area, with winding walks around the Overlook Reservoir. In Princeton, Wachusett Meadow Wildlife Sanctuary offers hilly paths through woods and meadows, unusual rock formations, and notable old-growth tree specimens. Take connecting trails to Wachusett Mountain and the Midstate Trail systems for more extensive, rigorous outings. Yeo also hopes that some small-scale programming, like guided nature walks and other family activities, will be available this summer.

The Trustees of Reservations, a Massachusetts-based nonprofit conservation organization, had opened the grounds of 91 of its 118 outdoor sites at press time, although its house (and other) museums, buildings, and most bathrooms will remain closed for the foreseeable future, according to director of public relations Aaron Gouveia. Access to especially popular properties—deCordova Sculpture Park and Museum, Fruitlands Museum, Naumkeag, World’s End, and the idyllic Crane Beach—is available only through advance online reservations. (That policy applies to Trustees members and non-members alike.)

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communities—trees and plants—can easily be habits—or measuring and monitoring the behaviors, playful interactions, and feeding birds, insects, and squirrels, noticing their homes and apartments—and we really want Yeo reports, “and nature isn’t just out in and with nature,” Mass Audubon’s Gail ance has motivated “folks looking for new shorelines—in Nahant, Winthrop, Boston, and Quincy.

It’s clear that the COVID-19 pandemic’s “stay-at-home” or “shelter in place” guidance has motivated “folks looking for new ways to engage with their surroundings and with nature,” Mass Audubon’s Gail Yeo reports, “and nature isn’t just out in the woods. It’s all around us, right by our homes and apartments—and we really want to help people recognize that.” Watching birds, insects, and squirrels, noticing their behaviors, playful interactions, and feeding habits—or measuring and monitoring the health of trees and plants—can easily be done in any local urban park.

The Appalachian Mountain Club (AMC) has local chapters throughout New England, including an active Boston-based group, that offer close-to-home hikes, walks, bike trips, and paddling adventures. AMC president and CEO John Judge, M.P.A. ’01, also recommends heading out to walk or bike on sections of the AMC-coordinated Bay Circuit Trail and Greenway, a system in progress that curves west of Boston, extending more than 230 dedicated miles from Newburyport and Plum Island to Kingston Bay, near Plymouth. (Find route details and maps for the greenway’s current components, many accessible by public transportation, at baycircuit.org.) The New England National Scenic Trail covers 215 miles across Connecticut and Massachusetts. In central Massachusetts, less than two hours’ drive from Boston, the 4.8-mile Erving Ledges-Hermit Mountain trail above Millers River offers panoramic views. Experienced hikers may enjoy the 1,240-foot Mount Lincoln route, in Pelham, or the easier, but rewarding, Royalston Falls.

Judge agrees with Yeo that “people are obviously chomping at the bit to get out.” Even earlier this spring, he reported, large crowds were arriving at trailheads, including many newer hikers ill-prepared for weather and climbing conditions. For those novices, he recommends learning more about outdoor adventuring online through AMC. But he also emphasizes that too many trekkers may cause irreparable damage to trails and threaten wildlife habitats and other ecologically sensitive environments that AMC is charged with stewarding. “We want people to get outdoors and connect with nature, at this time more than ever, and we believe people need it—it’s a shot in the arm spiritually, mentally, physically,” he acknowledges. “That said,” he adds, “we are working with the New England states, Maine and New Hampshire especially, to figure out how people can come up to Grafton Loop (38.6-mile backcountry hiking in the Mahoosuc Mountains) and Mount Lafayette and Franconia Ridge [Lincoln, New Hampshire] without the trails becoming like one of those clear days on Mount Everest where you’ve got people back-to-back waiting to summit.”

In an initial response to COVID-19, AMC closed its alpine huts for the first time in 132 years and its 12 summer-camping and cabin properties. But in late May, it opened reservations for these lodging sites: Gorman Chairback and Medawisla (in Maine), and the Highland Center at Crawford Notch, Joe Dodge Lodge at Pinkham Notch, and Cardigan Lodge (in New Hampshire). All were slated to start housing hikers as of July 1—with varying controls over food service and restrooms, and guest rooms occupied at half capacity. Judge does expect packed parking lots and streams of day-hikers, and therefore advises planning non-weekend excursions—or, better yet, opting instead for outdoor locales much closer to home, where the rewards of nature are often just as beautiful and restorative. “You can see some of the world’s most beautiful outdoors and wilderness,” he says, “right here in New England.”

### STAFF PICK: A COVID-19 Day at the Beach

**Sunscreen**, bathing suit, face mask, tape measure. Check. Beaches in and around Boston this year are drawing lines in the sand by restricting activities and, in many cases, reducing access to prevent overcrowding.

All Massachusetts state beaches—whether along the coast or inland lakes and ponds—have reopened (for now), but require face masks and 12-foot spacing between non-related individuals, and limit groups to 10 or fewer people. “‘Passive’ recreation—swimming, walking, sunbathing, and picnicking—is allowed; organized group sports are not. Check out Salisbury Beach State Reservation, and the lakes at Leominster State Forest and Hopkinton State Park or, closer to Boston, Mystic Lakes State Park, in Medford.

On Cape Cod and other coastal spots north and south of Boston, many municipalities, like Manchester-by-the-Sea and Gloucester, have opened beaches and parking lots to residents only, although Wingaersheek Beach offers some non-resident parking spots daily on a first-come, first-served basis.

New Hampshire’s ocean beaches are also open, and authorities have created larger pedestrian zones, through partial road closures and the elimination of parking spots, to accommodate the social-distancing requirements. In contrast to Massachusetts, however, New Hampshire allows only walking, running, swimming, and surfing—no tanning, napping, or picnicking. “This is not a time to drop your blanket and sit around,” according to Governor Chris Sununu: “We want people to be moving.”

—N.P.B.
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With social-distancing safety measures built in (partly thanks to its wide, still intact, nineteenth-century carriage roads), the arboretum stayed open through the early days of the COVID-19 pandemic, even as Greater Boston’s many cultural institutions were forced to shut their doors. As Friedman puts it, “We are here right in the middle of Boston, a pristine place, where you are walking on Olmsted’s canvas.” For thousands of visitors, the meandering pathways and botanical gardens have provided a critical restorative
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There’s always something interesting growing or blooming on the grounds of Weld Hill. The “cosmopolitan urban meadow” is packed with native and non-native perennials including late bloomers such as black-eyed Susan, chicory, and yarrow, providing visual beauty and productive habitats for a variety of pollinators and other creatures. Buzzing bees might be part of the arboretum’s efforts to attract and bolster regional species of this important ecological contributor. “There are more than 100 species of bees native to this area,” Friedman points out, “and we are trying to create habitats. With our new solar installation, the largest Harvard has ever done, we are planning a native meadowland and plantings from locally collected seeds, as ways our collection can support biodiversity.” Through another project, aimed at increasing and protecting bird populations, especially chickadees, swallows, and owls, 31 nest boxes are scattered throughout the grounds. In this COVID-19 summer, such missions seem to extend also to human beings in need of nature.

~ NELL PORTER BROWN

**TASTES & TABLES: Turkish-inspired Delights at Sofra**

At Sofra Bakery & Café in Cambridge, the phone starts ringing for take-out orders at 2 P.M. By 2:45, when we’re contemplating dinner and craving the rye-flour galette with a mélange of zucchini, goat cheese, and garlic ($14)—it’s already sold out. The dark-toffee flavor of that aged garlic (common in Asian cuisines) is irresistible. We take one of the last sausage pitas ($11) instead. Back home, eating on the patio, that spicy ground pork—mixed with pickled peppers, feta cheese, and a hint of orange flavor in a crunchy pastry wrap—becomes a new favorite. Other must-haves: the mezé platter ($12): dollops of creamy beet tzatziki, hummus, whipped feta dip, and a romanesco salad; and the cauliflower fatteh ($14), a slow-cooked dish with caramelized onions, pine nuts, and yogurt, sprinkled with sumac. The corner café’s been feeding sheltering crowds via brown-bagged goodies handed across a plexiglass-protected doorway, and this summer could resume limited service at its outdoor tables. Wherever you enjoy this nuanced, Turkish cuisine-inspired fare, don’t forget dessert ($4–$8): soft, double-chocolate “Earthquakes,” oatmeal cream pies, and sesame-caramel cashew bites. And on weekends definitely call way ahead for the hot and tender raspberry-rose-flavored turnovers and tahini-tinged, brown-butter donuts.

~ N.P.B.
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VIRTUALLY PERFECT: How to Plan Your Staycation Summer

Summer is different this year thanks to COVID-19. But even though we can’t gather, shop, or dine in person doesn’t mean we can’t keep busy. We just have to be creative.

These slower, languid days are ideal for home improvements. If you’ve decided to (finally) attack that musty closet or overflowing basement, call Jamie Goodman from the Clutter Guru. The Waltham-based personal organizer now offers a free 30-minute consult and half off remote organizing packages through the end of July. Just send a video of your space, and she’ll do the rest. If you’re turning your attentions al fresco, contact HomeHarvest, which specializes in edible gardens. Their outdoor landscape work is well suited to social distancing—and isn’t now the perfect time to grow your own fruits and veggies? Or adorn your interiors with antiques from sought-after Cambridge interior designer Heidi Pribell ’82; she’ll post a new treasure each day for purchase.

If you’re eager to get out of the house, check out our article “Greater Boston’s Season of ‘Social Trust,’” on page 8B. Then plan a picnic! Cult favorite East Boston Oysters brings the seashore to you with lux oyster, caviar, and cocktail-kit packages. Order by midweek for weekend deliveries throughout the Boston area. Or get your carb fix at beloved Bagelsaurus, outside Harvard Square, which offers online ordering and touchless pickups. Stock up on bagel assortments (request your favorites), cream cheeses, sandwiches, and even cookie dough. Or visit Cambridge’s Formaggio Kitchen for curbside pickup. Order cheeses, charcuterie, breads, jams, weekend barbecue—and even enroll in online wine-and-cheese tastings.

If you’d rather cozy up for a night in, check out Flour Bakery’s online cooking classes. Visit their Instagram feed for Sunday-evening baking tips with owner Joanne Chang ’91, hashtag #FlourLove. For a sophisticated feast, order from Harvard Square’s Nubar, which offers delicacies including crab beignets and steak frites, plus beer and wine. For something stronger, order cocktail kits from Brookline mixology pioneer Blossom Bar, specializing in Sichuan food and tropical libations. Their swanky kits come with ice, garnish, and glassware. Or do good while eating well by ordering casseroles from Huron Village’s adorable Talulla restaurant; proceeds from each to-go casserole purchase go toward bagged lunches for Cambridge schoolchildren. And if you’re not ready to venture out? Buy a Harvard Square Business Association e-card for future use at a variety of neighborhood merchants (learn more at www.harvardsquare.com).

Finally, immerse yourself in culture virtually. Harvard Square’s legendary Club Passim streams a roster of live folk shows (many are also recorded for future viewing); it’s free to tune in, but do donate to support musicians and the club. Bookworm? Hear the stories behind authors both popular and obscure on the “Brattlecast” podcast hosted by Brattle Book Shop experts. It’s updated weekly.

Start your Sunday morning right with curated DJ sets hosted by the Institute for Contemporary Art, coupled with a favorite brunch recipe; find info on Instagram at hashtag #ICABrunchJams. Or explore the world of artistic intrigue with the Isabella Stewart Gardner Museum, which hosts a virtual exhibit about the museum’s infamous 1990 art heist. Right in Harvard Square, drop virtually into the Harvard Art Museums, which offer online exhibits, kids’ activities, and talks. Finally, add a dose of adorable to your day each morning at 11 a.m., when the New England Aquarium posts new videos and activities. Get up close and personal with penguins, turtles, and more—it’s the next best thing to being in the water. ~ KARA BASKIN

Harvard Square's legendary Club Passim streams a roster of live folk shows (many are also recorded for future viewing); it's free to tune in, but do donate to support musicians and the club. Bookworm? Hear the stories behind authors both popular and obscure on the “Brattlecast” podcast hosted by Brattle Book Shop experts. It's updated weekly. Start your Sunday morning right with curated DJ sets hosted by the Institute for Contemporary Art, coupled with a favorite brunch recipe; find info on Instagram at hashtag #ICABrunchJams. Or explore the world of artistic intrigue with the Isabella Stewart Gardner Museum, which hosts a virtual exhibit about the museum's infamous 1990 art heist. Right in Harvard Square, drop virtually into the Harvard Art Museums, which offer online exhibits, kids' activities, and talks. Finally, add a dose of adorable to your day each morning at 11 a.m., when the New England Aquarium posts new videos and activities. Get up close and personal with penguins, turtles, and more—it's the next best thing to being in the water. ~ KARA BASKIN
BRED TO BE BEST

The Brain-Behavior Link

WHAT MAKES A border collie instinctually suited to herding sheep, a German shepherd perfect for police work, or a beagle superb at following a scent? Ever since the domestication of a Pleistocene wolf some 14,000 or more years ago, humans have played a decisive role in the evolution of dogs. First bred for tameness, dogs since then have been selected to perform many specialized tasks, such as pointing to prey, or guiding the blind. Could study of modern dog breeds shed light on how brains evolve in response to selection pressure on behavior?

Erin Hecht, an assistant professor in the department of human evolutionary biology, wondered if breeds’ specialized behavioral adaptations and abilities might be visible as neuroanatomical changes. When she compared MRI scans of 62 purebred pet dogs of 33 unique breeds, she saw noticeable patterns of difference.

In fact, she discovered six networks of brain regions that covary (change together), each associated with breeding for specific behaviors, such as sight hunting, scent hunting, guarding, and companionship. For example, in dogs that hunt by sight, she found differences in a network of brain regions involved in visual perception and navigation. “We think,” she says, “that might be related to visually tracking a bird or whatever the hound is following.”

Dogs’ skulls come in all sizes and shapes: some are large, some are long and narrow, and some are very small. But Hecht found that while brain size, body size, and skull shape do influence brain anatomy, there are also additional neuroanatomical differences across breeds over and above these factors.

Hecht and her colleagues published these results in the Journal of Neuroscience last September, together with a phylogenetic analysis of the modern dog breeds’ family tree. This established that the differences in brain structure among breeds could not be explained by deep ancestry. Instead, in separate branches of the tree, selection pressure for specific behavioral traits, likely within the past 200 years, led to the simultaneous emergence of particular networks of brain structures—thus, scent dogs from different branches of the family tree shared similar anatomical differences.

Hecht first became interested in studying the evolution of canid brains when she learned about a well-known experiment in Siberia to breed wild silver foxes to become either tame or aggressive. Since 1959, the tamest foxes—initially selected for how close they would allow a human to get before running away—have been studied in Novosibirsk, to learn whether selection for tameness might also have driven traits such as the floppy ears, wavy hair, and curly or shortened tails shared by many domesticated breeds. Sixty years into the experiment, says Hecht, the tamest foxes now react to people by wagging their tails. “They lick, they whimper, and seem overjoyed with the prospect of human contact.”

But surprisingly little research had investigated changes in their brains, as work by

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Dog breeds’ specialized behavioral adaptations and abilities are clearly visible as neuroanatomical changes.

are in the limbic system and the prefrontal cortex,” Hecht explains. “The limbic system governs instinctual emotional reactions, the fight or flight response, and aspects of social behavior that are cued by scents, while the prefrontal cortex regulates volitional types of behavior, as well as more complex aspects of social behavior like interpreting social signals and deciding what types of social signals to send in return. That’s where we’re seeing changes so far in the foxes.”

Intriguingly, though, in dog brains the morphologies related to tameness are not as clearly discernible, and Hecht says that a continuing behavioral study suggests that dogs are not as friendly as the tame foxes. First-year doctoral student Sophie Barton says she was “completely shocked by this—we expected the dogs to run to the front of the cage...when a stranger walked in..., but instead they adopted a wait-and-see approach,” acting neither aggressive nor friendly until they could discern the human’s intentions. Barton thinks that difference may have evolved as a result of dogs having lived in a complex human environment—and with very different selection pressures during the past 200 years of intensive breeding.

Although tameness is an important part of the initial stage of domestication, she says, the trait “can definitely be manipulated in later stages.”

Hecht and Barton are particularly interested in what these studies may reveal about the plasticity of the brain: how innate adaptations for a particular skill interact with acquired experience to shape neuroanatomy. The human brain, for example, has adaptations for acquiring language that are activated when listening to other people talk. A similar “experience-expectant plasticity” underpins skill behavior in working dogs, says Barton. Through the lab’s project website, caninebrains.org, she is recruiting dogs from working (herders and livestock guardians) and hunting breeds (retrievers, flushing, and pointers) with nonworking siblings, in order to study the neural changes caused by training and experience.

“We know that training is doing something,” says Hecht. “We’re trying to figure out how far an innate genetic inheritance gets you. And then, what’s the additional bump that you’d get from experience and learning?” In parallel work with humans, she and another postdoctoral researcher, Sujas Vijayakumar, are tracking how brains change when people acquire paleolithic toolmaking skills, crucial during a large part of human evolutionary history, and comparing those shifts to brain changes seen in undergraduates learning computer programming.

For now, Hecht and Barton hope to establish the dog as a model for evolutionary neuroscience, for learning how structures within the brain evolve and how the brain balances innate adaptations with propensities for plasticity. “I believe a lot of questions can be answered with these animals,” says Barton, “because we know what selection pressures they underwent to develop various skills and different types of behaviors.” Ultimately, the brains of dogs may reveal just as much about the brains of their masters.

Erin Hecht website: projects.iq.harvard.edu/evolutionaryneurosciencelab/home

CONSTITUTIONAL QUESTIONS

The Extinction of the Press?

When America’s Founders drafted the First Amendment, including its protection of a free press as key to self-governance, they could not foresee the twenty-first-century media landscape: Twitter and Facebook, filter bubbles that feed readers stories that reinforce their beliefs, and the shrinking number of local newspapers, now considered “legacy” media.

Dwindling access to reported news threatens to undermine democracy, warns former Law School dean and 300th Anniversary University Professor Martha Minow. “Newspaper newsrooms lost 45 percent of their employees between 2008 and 2017,” she says. “And since the start of the pandemic, there is a cascading set of reductions and cutbacks in [news] production, which is ironic...when people are so eager and desperate for news.”

Compounding the problem are a growing number of “news deserts”: communities where there are no longer media outlets sending reporters to city-council meetings, to monitor how tax dollars are spent, or to ask local public-health officials about their response to COVID-19. Minow once met one of the whistleblowers who exposed the problem of lead in the water in Flint, Michigan. “She said to me, ‘There are many Flints all over the country, and the difference was that in Flint there was some news media.’”

As social-media platforms become a predominant news source, “Professional journalism, messages from your cousin, or messages from a Macedonian adolescent paid to design arresting ads can seem equal,” Minow wrote in a recent article published in the Loyola Law Review. There’s no human editor vetting the news, or ensuring that content meets journalistic standards. And unlike newspapers, in which a reader might head first for the sports page but encounter topics such as business or politics along the way, social-media sites such as Facebook deliver highly curated content based on read-
ers’ habits, shielding them from other topics and perspectives.

Because user-behavior data, including shopping habits and search history, are collected along with demographic information and sold to advertisers eager to reach target audiences, “It makes the selling of ads far more efficient,” Minow explains—including ads for political candidates, which “are often a very important part of the business for many media outlets. Now the political ads can be very, very sculpted and sent only to some people, so other people don’t see those messages.”

Can a healthier news ecosystem be built? Minow, who is writing a book on this topic (forthcoming from Oxford University Press), sees a role for government in ensuring citizen access to reliable information, and views this approach through the particular lens of a constitutional lawyer. “What’s striking to me is how many proposals for change have been met with the argument, ‘Oh no, that violates the First Amendment,’” she says. Courts, she adds, largely refrained from interpreting the First Amendment this way until the twentieth century, only then beginning to enforce it gradually, and then, in the past two decades, adopt a libertarian conception.

Prior to this, “There was always deep involvement by the government in supporting media, assisting media, and shaping media,” she says. This began with subsidies that reduced postage for colonial newspapers, which yielded “more newspapers in circulation in this new country per capita than there were in England.” Throughout U.S. history, the Supreme Court has halted taxes on newspapers, government policies have promoted the growth of communications technologies from the telegraph on, and antitrust laws have been used to foster competition among media outlets.

Minow acknowledges the inherent risks of government involvement in media. “We certainly do not want a government censor,” she says. “On the other hand, there’s a lot of latitude for government action—particularly around the structures of media.” Some experts propose using antitrust laws to break up Facebook and other media giants, an idea with some bipartisan support in Congress. Minow is “less confident that that’s a promising solution, because even if Facebook and Google were broken up into four or five companies each, they’d still be enormous.” But she offers a host of other strategies, including the use of consumer-protection laws to require media-company transparency about how their algorithms operate. Social-media companies could be treated like utilities, privately owned but subject to regulation, to protect citizen access to information. Tax policy could be used to incentivize new news organizations, particularly in news deserts.

She also calls for more enforcement of fraud in cases of election interference, particularly for political ads generated by bots in other countries. “There should be some consequences, including shutting some op-

Illustration by Gary Neill

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“There’s only one private enterprise that is mentioned in the United States Constitution and it’s the press,” Minow emphasizes.

Only immunity can bring an end to the current pandemic—whether through vaccination or the potentially deadly ordeal of infection. Unfortunately, it’s not a given that either a bout of COVID-19, or any of the experimental vaccines now in development, will confer long-lasting immunity. The human immune system’s response, even to a pathogen it recognizes, can range from toothless to deadly overreaction—and this coronavirus may be able to manipulate that response. To understand how people generate antibodies against SARS-CoV-2 (which causes COVID-19), and how vaccines can avoid playing into the virus’s hands, researchers in the lab of Stephen Elledge, Mendel professor of genetics and of medicine, are honing a tool developed to inventory antibodies into a method for taking a snapshot of the body’s response to COVID-19.

Two kinds of testing inform humanity’s response to this pandemic. Diagnostic tests—like the now-familiar nasal swabs—check for active infections by looking for the virus itself. Immunity tests check for past infections by searching blood serum for antibodies that bind to SARS-CoV-2: the molecular signs that our immune system has seen this specific virus before. But all antibodies are not created equal: whether the antibody actually provides immunity depends on which part of the virus’s surface it binds to.

There’s no silver bullet, Minow declares; such problems will require a variety of solutions. Though she stresses that the history of the press in the United States is hardly all rosy, she argues that nurturing a healthy press is a vital project. “There’s only one private enterprise that is mentioned in the United States Constitution and it’s the press,” she emphasizes. “That raises the question: is the Constitution, our way of life, our government, all predicated on the existence of an institution that may not exist? When the news function is folded in as part of the selling of Internet platforms, where gathering news and distributing it are not even in the top five purposes, what happens to a democracy?” —ERIN O’DONNELL
that would make the infection worse. The device Elledge’s lab has developed, called VirScan, is a serological (serum-testing) tool, like other common immunity tests, but beyond scanning for antibodies to a particular disease, it characterizes what kind of antibodies to that disease are present. Each antibody binds to a different “epitope”—a knob, bump, or handle on the surface of a virus. VirScan allows a single blood sample to flow over dozens or hundreds of different epitopes, from one virus or many, and detects whether the blood contains antibodies that bind to each epitope. Further study can then determine which epitope binding sites are most effective at neutralizing the virus.

Elledge’s group developed the relevant technology in the early 2010s, looking first in the immune response.”

ful, and yet they’re playing a really big part neutralizing, they don’t appear to help—bodies attached to these epitopes “are not ’19, who worked on the original study, anti-

in many cases, explains Tomasz Kula, Ph.D. added evidence supporting this hypothesis: Even as the accuracy of these tests improves, VirScan and related serological tests may not be enough to show that individuals are safe from the virus. Immunity is likely to wane with time, and any single test result indicating a prior immune response could be a false positive. Nevertheless, says Kula, “the chance that we can find something that can make even a small contribution” toward hastening development of an effective vac-

cine “is energizing. This is why we became scientists.”

~Bennett McIntosh

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Icon

Harvard’s oldest building at 300

Massachusetts Hall, for many people, is Harvard. It guides visitors through Johnston Gate into what is now Harvard Yard. Its compact design—pleasingly proportioned Early Georgian red brick with white trim, devoid of frills—defines the architectural idiom for much of the rest of this campus (and others).

Its history anticipates the University’s, too. A growing student body (“ye Sons of ye Prophets are now so increas’d”) had spilled over into “lodgings in the town,” spurring “uncomfortable Views of Mischeifs impending.” Accordingly, various building plans were drawn—literally—by Benjamin Wadsworth, a Fellow of the College (and later president), and by President John Leverett (a task modern presidents no longer need fulfill). Successive fundraising memorials to the General Assembly succeeded in extracting two tranches, for £1,500 and £2,000 (a chore very much on presidents’ agendas today). The construction was sufficiently far along for Commencement visitors to see much of the building in the summer of 1720. A novel feature was the “Apparatus Chamber,” the precursor to the vast scientific facilities today.

For all its welcome familiarity as Harvard’s oldest standing building, Mass Hall has no more resisted change than the burgeoning academy around it. The clock was added in 1725. Lecture rooms and laboratories replaced housing during a gut renovation in 1870. At an affectionate, gala bicentennial celebration in 1920 (addressed by President A. Lawrence Lowell and Massachusetts governor and U.S. vice president-elect Calvin Coolidge, among others), more than one speaker recalled the tradition of students fleeing dull classes via the fire escape. Its past as a dormitory, “a place to sleep in,” carried over as “that tradition of sleep remained after it was turned into a lecture hall.”

The building has witnessed rougher circumstances, too. After the College removed to Concord in 1775, Continental Army troops quartered on campus; two years later, Harvard granted permission to house imprisoned British officers in Mass Hall. In 1778, Harvard sent the Commonwealth a detailed account of claims for damage to its properties and stores—including the theft of Mass Hall’s metal fixtures—totaling £417.8.8. The still-solid building weathered the Civil War and World War I, but despite Lowell’s encomium to its thick brick walls and “solidity,” it suffered fire damage in 1924. The ensuing repairs restored the dorm rooms—until, emerging from the Great
Graduation, Socially Distanced

There’s nothing like a global pandemic and economic meltdown to concentrate the mind and focus the joyous celebration of graduation on the very hard work at hand. And so it was with Harvard’s condensed, online University degree-conferral ceremony (“Honoring the Harvard Class of 2020”) and its diverse schools’ class days and celebrations on Thursday, May 28, as Tercentenary Theatre lay vacant (see the cover) on an occasion when 32,000 happy people would normally be present. The community has known since March 20 that the 369th

Commencement, as usually understood, was not to be. In response, among so many other pressing priorities, University leaders, arts and music staff members, and students themselves joined forces to invent a suitable procedure for transforming candidates into graduates (with that hard-won, Harvardian credential officially bestowed)—and with the promise of proper festival rites in the future, when the pandemic loosens its grip on people worldwide.

The result was an innovation: an online morning broadcast, with President Lawrence S. Bacow hosting and conferring the aforesaid 8,174 degrees and certificates en masse, preceded and followed by online school events—some including high-wattage class-day speakers, and showing their newly minted alumni individually, and by name.

That bare outline does no justice to the emotions expressed, the very serious commentary on the nearly overwhelming issues of the day, or the community’s resilience in embracing both.

The depopulating of the campus on short notice in mid March left nearly everyone—and perhaps most poignantly, the College’s expectant seniors—bewildered and disoriented. Turning to the most basic indicators, a section of The Harvard Crimson’s senior survey on COVID-19-related matters found 35 percent of respondents reporting inadequate study space at home (or wherever); 21 percent struggling to schedule work from distant time zones; 17 percent having to juggle coursework and an obligation to help support their families; and 11 percent confronting illness (personally or within their families). One can only imagine how they felt.

Absent a Baccalaureate, Bacow sent a message to the seniors on May 27. “When we recruited you,” he wrote, “we offered you the opportunity to work with great faculty, and you did. But when we recruited the faculty to Harvard, we offered them the opportunity to work with extraordinary students, students who would challenge them like no other, and you did!...At times like this, I like to recall one of my favorite passages from the Talmud. It is the reflections of a great scholar. ‘I have learned much from my teachers,’ he wrote, ‘more from my colleagues, but most from my students.’ On behalf of all of us at Harvard, thank you for having taught us so well. It has been our joy to share this campus with you.”

The administrator closest to them, College dean Rakesh Khurana, told the seniors who tuned in on Thursday afternoon, “Even in the face of enormous losses we are experiencing on the global level, it’s okay to grieve for the smaller ways that your lives have shifted dramatically and unexpectedly...and to mourn what you have lost by missing out on these last few months at Harvard.” Beyond the moment, he reminded them, “[T]oday is a moment to think about what lies ahead, and to ask yourselves how you are going to move forward with hope into a world that looks so different from the one you were preparing to enter” (see harvardmag.com/comm-obrien-20).

Others found unique ways to articulate the prevailing sentiments. In their impeccably delivered undergraduate and graduate English

Acknowledgements to your Excellency and Honours for this great Benefaction to the College....” Sadly, the following June 23, before the first graduation and accompanying revelries since Mass Hall’s completion, the Overseers had to vote that “there be a private Commencement this year.” Why? “By reason of the present Spreading of the Small Pox.”

~John S. Rosenberg

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Martin Baron

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Toward the end of his address, Baron continued: “To determine what is factual and true, we rely on certain building blocks. Start with education. Then there is expertise. And experience. And, above all, we rely on evidence.” As “education, expertise, experience, and evidence” are “devalued, dismissed, and denied,” the idea of objective fact is being undermined, “all in pursuit of political gain.” As evidence, Baron cited “a systematic effort to disqualify traditional independent arbiters of fact,” from the press to the “courts, historians, even scientists and medical professionals—subject-matter experts of every type.”

He cited W.E.B. Du Bois, A.B. 1890, Ph.D. ’95, who in 1935, distressed at how deceitfully America’s Reconstruction period was being taught, assailed the propaganda of the era. “Nations reel and stagger on their way,” Du Bois wrote. “They make hideous mistakes; they commit frightful wrongs; they do great and beautiful things. And shall we not best guide humanity by telling the truth about all this, so far as the truth be ascertainable?”

Baron concluded:

At this university, you answer that question with your motto “Veritas.” You seek the truth—with scholarship, teaching, and dialogue—knowing that it really matters.

My profession shares with you that mission—the always arduous, often tortuous and yet essential pursuit of truth. It is the demand that democracy makes upon us. It is the work we must do.

We will keep at it. You should, too.

None of us should ever stop.

Bacow thanked him “for your own work to reveal the world as it is” (see harvardmag.com/comm-report-20).

The glue that holds this enterprise together, at Harvard, is the joint dedication, even under severely adverse conditions, to sustain a community committed to that pursuit of truth, and to one another’s ability to do so.

Some of that labor takes place selflessly, out of sight. Working from her family home in Saline, Michigan (near Ann Arbor and one of America’s great public universities), Terzah Hill ’20 spent much of the last month of her senior year editing 1,021 of her classmates’ video submissions of special moments and memories into a presentation for the Thursday afternoon College celebration—while also directing the House faculty deans’ TikTok-inspired video greetings to their departing students. Amazingly, she had earlier done similar work for the admissions office, preparing the video welcome to the perhaps-about-to-arrive class of 2024 (whose “Visitas” was necessarily conducted virtually as well). Her reaction to...
Ending an Epidemic
The when and how of vaccines

An effective vaccine remains the best hope for ending the COVID-19 pandemic. As deaths and economic damage mounted worldwide this spring, every reasonable measure to seed and accelerate vaccine development was being considered. By late May, more than 170 candidates were under development—an unprecedented response in terms of scope, speed, and cooperative scientific effort to combat a virus genetically sequenced only at the beginning of January. Initial clinical trials are being expeditiously conducted, and debate has begun over the ethics of “human challenge trials”—the idea, raised by Harvard epidemiologist Marc Lipsitch and others, of deliberately infecting carefully selected volunteers to speed tests of potential vaccines’ efficacy.

Although no vaccine has ever been developed and approved in fewer than four years (for mumps), scientists are nevertheless cautiously optimistic that the first doses of a vaccine against SARS-CoV-2 (as the coronavirus is formally known) might be available in the United States later this year, or early next, if emergency-use authorization is granted by the Food and Drug Administration (FDA). But even if several vaccines make it through rigorous human clinical trials and are approved for general use on that extraordinarily ambitious timeline, they will initially be in short supply, given limited manufacturing capacity, adding urgency to another question with complex ethical, practical, and scientific dimensions: who should be vaccinated first?

Developing a Vaccine
The ability to develop vaccines against an unforeseen pathogen and inject them into human volunteers in 60 days, explains Barry Bloom, former dean of the Harvard T.H. Chan School of Public Health (HSPH), was an idea first advanced by the U.S. Biomedical Advanced Research and Development Authority (BARDA), which is providing substantial financial support to several large vaccine efforts worldwide. The authority, created in the aftermath of 9/11 to protect against biological, radiological, and chemical threats, including pandemic influenza, has promoted the concept of vaccine platforms that could be quickly adapted to fight any new virus. In fact, from the time of the public release of the SARS-CoV-2 sequence to the injection of a BARDA-supported vaccine “into the first volunteer’s arm…in a phase-1 safety test,” Bloom notes, took just 62 days.

But not every vaccine will make it through all phases of human clinical trials. One expert estimated that the first two COVID-19 vaccines to be tested in humans (from Oxford University and the biotech company, Moderna) each had about a 20 percent chance of proving successful through phase-3 trials, which test safety and efficacy in large numbers of people. That is one reason BARDA and other institutions are supporting multiple parallel efforts. Another is that no single manufacturer can produce the vaccine quantities needed. “What will be limiting,” Bloom predicts, is “who has the capacity to produce at a global scale billions of doses if in initial studies [a vaccine] is shown to be safe and effective.”

Evidence that a vaccine could work at all arrived on May 20, when a Science paper showed that macaques, which share 93 percent of their DNA with humans, become sick upon exposure to SARS-CoV-2, and then develop protective antibodies as they recover (see harvardmag.com/covid-immunity-20). In an experiment led by Castle professor of medicine and professor of immunology Dan Barouch, animals exposed to the virus a second time five weeks later developed no clinically observable symptoms and displayed immunologic control of the disease. These data showed that natural protection against COVID-19 exists in primates, establishing a firm scientific foundation for the global vaccine efforts. (Developing vaccines for pathogens for which there is no natural protective im-
Economics professor Melissa Dell has studied everything from colonialism’s impact on development in Indonesia to global trade and worker displacement in Mexico. A development economist, she studies countries her discipline once ignored: “In the 1960s, 1970s, 1980s, people in academic institutions like Harvard predominantly studied the U.S. and Europe,” she explains. “Economics was a very mathematical field” that assumed “markets function perfectly and information is perfect, and you just can’t really think about development if you make those assumptions.” On a College internship in Peru, Dell worked on microfinance, making small loans to women selling snacks on the street—and realized its limits as a poverty alleviation strategy. “If you give another woman a loan to set up a stand,” she says, “it may be good for her, but essentially it’s kind of stealing business from other places.” Growing up in Enid, Oklahoma, where her parents were contractors on an Air Force base, she researched how to apply to schools like Harvard on her own: “At first my parents were kind of annoyed, like, ‘Oh, that’s not a place that’s for people like us.’” Financial aid allowed her to attend; she graduated as a top student in 2005. After a Ph.D. from MIT, Dell joined Harvard’s Society of Fellows and then its faculty in 2014. She recently won the Clark Medal, the top prize for economists under 40, and has been diving into machine learning in order to digitize vast troves of data—critical, she says, to unlocking previously unanswerable questions about countries’ economic histories. Meanwhile, the former ultramarathoner’s priorities have been changed by two young children: beyond family and economics, “there’s really not time for anything else.”
the nose or the throat,” a potential indicator of protection against transmission. Such a result is common in vaccines, said Fortune, but “sobering” with respect to COVID-19. If transmission continues after vaccination, then “to protect the population, we’re going to have to be vaccinating many, many more people.”

The best data, she said, had come from Sinovac’s inactivated virus vaccine, and from the Barouch lab, which conducted experimental tests using DNA vaccines that probed the primate immune response to the SARS-CoV-2 spike protein, which the virus uses to enter cells. The researchers, who created six vaccine variants, found that optimal protection in the lungs and upper respiratory tract of macaques was achieved with the full spike protein, which produced levels of antibodies comparable to that seen in natural infection—useful information for other gene-based vaccine development efforts, if the correlation holds for humans.

All of the half-dozen or so vaccine platforms underlying development efforts worldwide have pros and cons. Nucleic acid vaccines made of DNA (like the six Barouch developed to test primate immune response) or RNA (like the candidate from Moderna), can be thought of as chemicals, making them relatively easy to design and distribute. They are nothing more than instructions that tell cells in the body to produce parts of the virus, training the immune system to recognize the real thing. This approach is rapid and promising, but untested at scale: no nucleic-acid vaccine has yet been approved for use in humans. Killed or inactivated virus vaccines like the one from Sinovac, have a proven track record, but manufacturing may require handling large amounts of infectious virus before it can be rendered harmless.

Vaccines that use a harmless virus to deliver an antigen, like the one being developed by Oxford, have been licensed for use in humans, and have shown promise in clinical studies against numerous emerging diseases. The trick with this approach is choosing a delivery virus that the immune system has not seen before—otherwise the antigen payload may be intercepted and destroyed by the immune system before inducing a beneficial effect. Other vaccine platforms use recombinant proteins (the technology used to produce annual flu shots), or even attenuated live virus—the latter dependent on extensive safety testing, for obvious reasons.

Barouch, who directs the Beth Israel Deaconess Medical Center for Virology and Vaccine Research, has partnered with Janssen, the pharmaceutical division of Johnson & Johnson (J&J), to develop a recombinant adenovirus vector vaccine. The vaccine uses a harmless cold virus uncommon in North America, Ad26, modified not to replicate in humans, to shuttle the SARS-CoV-2 spike protein into cells, thus priming an immune response that will protect against COVID-19. Such a vaccine platform does not require an adjuvant (an additive to stimulate the immune response), Barouch explains, the way purified protein-based or inactivated virus vaccines often do, because the Ad26 viral particle is itself recognized as foreign by the immune system, and thus helps provoke an immune response.

Barouch says the development process since January has been breathtaking: just three days after the virus sequence was published, his lab had designed DNA and adenovirus vector vaccines by working nights and through the weekend. Animal studies began less than a month later, and by March, J&J, with support from BARDA, had announced that they would commit $1 billion to deliver a billion doses of vaccine, beginning with delivery of the first 300 million-plus doses starting in 2021.

The vaccine is being tested in animals, but results were not available as this magazine went to press. Barouch expects even better results than from his experimental DNA variants, based on his experience with earlier adenovirus vector vaccines he created against Zika and HIV; in those cases, he reports, the antibody responses are durable for a year or more, after only a single shot. Human clinical trials, testing both a single and booster shot (double shot) regimen against COVID-19, will begin “at latest” by September, according to a March news release—possibly sooner.

### The Dilemma of Deliberate Infection

As the number of coronavirus infections passed six million globally at the end of May, and deaths approached 400,000, the desire to accelerate vaccine development even further led some scientists to actively advocate for the use of “human challenge trials” to get immediate answers on efficacy. Others, including professor of epidemiology Marc Lipsitch, director of HSPH’s Center for Communicable Disease Dynamics, said such trials should at least be considered, and not dismissed out of hand.

In the usual course of clinical testing, phase-1 and -2 trials assess safety, and whether a vaccine elicits immune responses in a small, but progressively larger, number of volunteers. Phase-3 trials recruit hundreds or thousands of volunteers representative of the total population, and then wait for them to become naturally exposed to the disease. By tracking outcomes over time, researchers can measure how effectively the vaccine protects against infection. This is the most definitive way to test a vaccine, but also the slowest. Such trials are already proceeding on an accelerated basis, with no gaps between phases.

A human challenge trial, by contrast, injects a small number of volunteers with either a vaccine or a placebo, and then deliberately infects them with...
the virus. Lipsitch and two colleagues explored the ethics of this approach in a paper published in The Journal of Infectious Diseases. He suggests it may be ethically superior to standard trials, because the faster a vaccine is approved, the more lives will be saved. In addition, the risk that a coronavirus vaccine could enhance the disease in some people might be detected more quickly in such a trial, preventing harm in a larger cohort. Any participants in the placebo group who became ill would receive excellent care and access to any known treatments, and only healthy young volunteers without comorbidities would be chosen, preferably from settings where they were already at high risk of natural infection. Discussions of such trials have occurred at the World Health Organization, in Congress, and at the FDA, and there is no shortage of volunteers: an independent website, 1daysooner.org, has attracted more than 26,000 people from 102 countries who wish to participate. Jacobson Research Professor of public health Barry Bloom, the former HSPH dean, points out, however, that anyone volunteering for human experimentation must be able to provide informed consent—but not even medical experts know all the risks associated with COVID-19. Though he is not opposed to human challenge trials in principle—and he notes that this is the only substantial issue on which he and Lipsitch have ever disagreed—Bloom adds that he knows of no precedent for such trials when no approved treatment is available. And he worries about the issue of moral hazard: “In the world of economics, it occurs when someone profits, or in this case is protected, by putting others at risk. I find it morally concerning that scientific advocates are recommending live challenges...when they are unwilling to serve as volunteers themselves. That’s a dicey business.”

There are also practical objections. Bloom notes that challenge trials would be restricted to healthy young volunteers, but the high-risk demographic is “people over 60 with pre-existing conditions.” Immunity and reactions to vaccination change with age, so “You are not going to get the answers” about effectiveness in that group without testing. And in children, “The aim of any vaccine is to reduce adverse effects to one in a million or fewer.” Human challenge trials are too small to detect adverse effects, including the possibility that a vaccine might enhance disease, says Bloom. “No company would want to expose itself to legal liability because a product had not been fully vetted” by skipping large-scale trials. And by the time researchers have spent months figuring out how to infect volunteers (by aerosol or swab), and in what dose, phase-3 testing of the vaccines that are furthest along in development—expected to start this summer—will have already begun.

Lipsitch said that his aim is not to advocate for human challenge trials, but to “keep all options on the table,” since classical efficacy trials are challenging to plan: “It’s quite uncertain where there will be adequate infrastructure and incidence of infection at the time of a trial, to do it well.”

The Head of the Line
If one or more vaccines are approved for emergency use late this fall, and for general distribution beginning next year, the next question will be one of priority: who should be inoculated first?

Domestically, essential workers at high risk of exposure in sectors such as health care, public safety, the trades, the retail food industry, and transportation seem likely candidates. (Evidence from Asia showed that infections among such groups drove nearly half of early transmission.) Vulnerable populations, such as nursing-home residents, might be another high priority. But designing the best vaccination strategy to protect that population will depend on knowing how well older people tolerate the vaccine. Do they develop a protective immune response? “Vaccines sometimes work quite poorly in people over 60,” says Bloom, which might require higher doses, or special adjuvants, or different strategies, to achieve protection. Years ago, public-health experts “were quite surprised,” he says, “when they found that after vaccinating children against pneumococcus, pneumonias in grandparent-aged people almost disappeared, even though they themselves were not immunized, because the kids were not transmitting it to them.”

The question of how vaccines will be distributed also has international dimensions. Lipsitch predicts enormous “political and economic pressures on who gets access to those vaccines.” Bloom agrees. “There’ll be many who believe that because BARDA has supported vaccines, those should go to the U.S., because we paid for them. And what happens then to the rest of the world?” Such discussions, he said, should occur well in advance of the first vaccine approval.

~Jonathan Shaw

The Coronavirus Campus
The factors influencing the fall semester—and beyond

As Harvard leaders—and their higher-education peers nationwide—make early-summer decisions about the academic year to come, they confront extraordinary uncertainties, with little useful guidance. The Great Recession and after were financial crises, highlighted by the collapsing value of the endowment, and resolved in time by belt-tightening, economic and financial-market recoveries, and copious fundraising. The COVID-19 pandemic is a health crisis requiring that students and teachers be separated from one another and from campus, as researchers are from laboratories, libraries, collections, and field work—thus impeding every aspect of a university’s work. That has raised costs and crimped revenues—a follow-on financial threat exacerbated by the virus-precipitated severe recession. The University must envision anew how to operate safely in this context by fall, and within its distinctive community and resources.

-How to teach? The headline decision for every college and university is whether to aim for residential education by summer’s end; rely on remote instruction (improved from the offerings cobbled together under duress last March); somehow mix the two; or adopt an altered schedule and program. The California State University system announced early that it will be online this fall. Notre Dame plans to begin the semester in residence in early August, operate continuously until Thanksgiving, and end the term then. Stanford, on the quarter system, will open on time and allow undergraduates to be in residence two of three quarters, but with online teaching the “default” throughout the year—per-
haps a less feasible option for Harvard’s semester system. And some schools may opt to invite certain cohorts to campus (freshmen, seniors, those who need labs or performing-arts facilities), but not others—or have students attend on a staggered basis.

These models merited attention at Harvard because its schools’ student bodies and pedagogies vary, meaning they might not all adopt the same instructional model. Provost Alan M. Garber advised the community on April 27 that “Harvard will be open for fall 2020” (see harvardmag.com/fall-plans-20). But he added: “[W]e will need to prepare for a scenario in which much or all learning will be conducted remotely”—and pointed to the possibility of “different approaches to learning and research” among the schools.

Indeed, on May 13, Harvard Medical School dean George Q. Daley and senior colleagues announced that “fall 2020 courses will commence remotely for our entering classes of medical, dental and graduate students” and for external education programs. They hoped “to be able to hold in-person research and clinical experiences for our returning medical and graduate students.”

The large next shoe dropped on June 3, when the Graduate School of Education announced it would be online for the 2020-2021 academic year, and the Graduate School of Design (GSD), Divinity School, Harvard T.H. Chan School of Public Health, Kennedy School (HKS), and Law School (HLS) all announced online operations for the fall term. (See harvardmag.com/covid-onlineschoolsdistributiondown-20 for a full report.) The Faculty of Arts and Sciences (FAS; comprising the graduate school, College, and school of engineering and applied sciences) and Business School (HBS) are on deck.

● Who will enroll? Given its fiercely selective admissions and the perceived value of a Harvard education, the University is well-positioned to attract students (and enable them to attend regardless of financial need)—major advantages. Institutions of higher education nationwide report lower rates of acceptance than anticipated; vocal resistance to matriculating if instruction is online (and to paying full tuition if so); and, of course, health concerns. A survey of 10,000 students conducted after an Inside Higher Education report on options for fall instruction yielded 78 percent of respondents who found in-person classes “appealing”—but less than one-third judging any online-only alternatives similarly.

If safety issues dictate remote learning, some undergraduates may opt for gap years or other leaves; the Yard and House residencies, common dining halls, and larger lecture classes are all antithetical to social distancing. (Ironically, of course, fewer attendees in the fall would simplify measures to “de-densify” the campus for those who are present—perhaps accommodating some in those emptied professional-school facilities.) The graduate and professional schools may present lesser enrollment challenges. All across campus, the welfare of faculty and staff members considered at high risk also weighs in the planning.

Another calculus comes into play for international students. Many borders are closed, many flights are grounded, and the United States has shut down visa issuance. About 800 undergraduates (12 percent of the total) are international—but about one-third of the Graduate School of Arts and Sciences cohort are from outside the United States: a significant number of research and laboratory assistants, and instructors of undergraduates.

Those obstacles loom even larger for some of the professional schools: HBS (37 percent of M.B.A. candidates); HKS (48 percent of degree candidates, including more than three-quarters of those in one program); and GSD (55 percent of degree candidates). Even HLS, with its largely U.S.-focused curriculum, has a significant number of international J.D. candidates (14 percent) and a large cohort of international LL.M. students (typically, 180 annually).

The latter three have made their decision: atop health concerns, with the borders shut, de facto or de jure, they clearly faced a radically smaller resident cohort and a very different student body and classroom experience. Schools dependent on tuition income may face transformed finances as they support remote teaching while preparing to resume residential classes (see below on students’ choices). HBS announced on April 27 that students admitted for this fall (the M.B.A. class of 2022) may defer their enrollment for one or two years; vacant spots will be filled, if possible, from the waitlist—but the school is willing to have a smaller class than usual.

● What are the economics? The University has estimated that revenue would fall $415 million short of expectations for the fiscal year ending this June 30, and a further $750 million short of the expectations built into the budget for fiscal 2021, drawn up just a few months ago (see a full report at harvardmag.com/750m-shortfall-20). In her May 5 note conveying the news, executive vice president Katie Lapp cited spring-semester room and board refunds; cancellation of residential continuing- and executive-education programs; and the loss of research funding as labs closed. Revenue for the fiscal year now ending might have been about $5.8 billion pre-coronavirus, rising to perhaps $6.1 billion in the year on deck—implying shortfalls of 7 percent (all coming in a rush late in the semester) and a further 12 percent, respectively.

Because Harvard committed to pay idled staff members and contractors (dining and janitorial workers, research assistants, security guards) through June 28, the forgone revenues were not equally offset by expense reductions, so operating surpluses will be reduced, or turn into losses. Looking into the next year, Lapp raised the possibility of furloughs or layoffs—likely if housing, dining, and other facilities are not in use.

Executive education. The evaporation of continuing and executive education illustrates how the 2020 pandemic differs from the purely financial upheaval a dozen years ago, and puts these daunting sums in context. Netting out financial aid, Harvard received about $500 million in continuing-education revenue in fiscal year 2019—nearly half from HBS’s powerful franchise. (FAS’s extension operation ranks second in size.) With the suspension of residential teaching, HBS’s executive-education business essentially vanished from March through at least this summer. That abrupt upheaval, plus slower publication sales and reduced philanthropy, lowered expected revenue for this fiscal year by $115 million (see harvardmag.com/covid-schools-response-20). The school telegraphed in April that its budgeted $433 million surplus would turn into a $22-million deficit, but by early May forecast savings and spending cuts that could yield a break-even year, or perhaps even a small surplus. In fiscal 2021, HBS anticipated “an even larger drop in revenues,” reflecting executive education and other pressures—implying “a potential deficit for the year of as much as $80 million.” For details across the University, see harvardmag.com/exec-ed-losses-20.

Degree-program tuition. In fiscal 2019, HLS, the GSD, and HBS derived 45 percent, 42 percent, and 41 percent of their operating revenue, respectively, from tuition (including executive education). The FAS, in contrast, got 50 percent of its operating revenue from endowment distributions, and just 23
With the endowment’s value likely re-
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pay for coronavirus costs—reversing the
further assess distributions by 3 percent to
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mission as care institutions.

investment in both the future of medical
ties dependent on laboratories, collections,
field work are operating minimally, or not
at all. Funds have been available to sustain
staff during the enforced shutdown, but at
some point, the work must be pursued; ab-
sent supplemental federal appropriations
of other income, faculties will have to make
up the gap from elsewhere in their budgets.

Other losses. HMS—which derives more
than 60 percent of revenue from sponsored-
research support and endowment distribu-
tions—has other vulnerabilities. On May
7, Dean Daley advised the community that
HMS would incur losses of $39 million to $65
million in fiscal 2020. He cited executive-ed-
ucation shortfalls, but most prominently, a
strategic use of HMS’s resources: “our deci-
sion to stand in solidarity with our affiliated
hospitals...by forgiving their FY20 contri-
bution to HMS, which totals $31 million.”
The affiliates, incurring reported multibillion-
dollar shortfalls in revenue as they devoted
their resources to caring for COVID-19 pa-
tients, are the school’s major clinical teach-
ing partners—so this action represents an
investment in both the future of medical
education and the hospitals’ foundational
mission as care institutions.

The endowment and philanthropy. With the endowment’s value likely re-
duced, the Corporation will cut the funds
distributed in fiscal 2021 by 2 percent, and
further assess distributions by 3 percent to
pay for coronavirus costs—reversing the
recent annual growth in revenue from that
source. (Read a full explanation at harvard-
mag.com/covid-onlineschools-distribu-
tiondown-20.) Also of immediate moment
may be the fiscal effect of the pandemic on
donors and their potential interest in new
needs revealed around the planet. There are
indications both that campaign-fueled lar-
gess had already crested (current-use gifts
to FAS declined 14 percent in fiscal 2019)
and that some major donors are reassess-
ing their priorities. And of course President
Lawrence S. Bacow, the deans, and develop-
ment professionals have been grounded
since March, limiting their opportunities to
outline Harvard’s evolving priorities.

Higher costs. Finally, the COVID-19
campus differs from its predecessor. Hard-
ening Harvard against the virus and modi-
fying operations imply continuing expens-
es. Deans thus find themselves learning
about enhancing ventilation to increase
indoor-air exchanges, retrofitting doors
and bathrooms for hands-free operation,
and perhaps bolting down furniture to
enforce safe distancing. Laboratory staff-
ing may have to be altered, and personnel
equipped with shielding and protective
equipment. (Given local orders suspend-
ing construction from April into late May,
the engineering and applied sciences faculty
defered its planned summer move to its
Allston facility until January; see harvard-
mag.com/seas-move-deferred-20.)

And with fully residential teaching de-
ferred, the hurried training in Zoom and
redesign of class exercises of March must
morph into something more thoughtful and
engaging—requiring further heavy invest-
ment in remote instruction, but perhaps
leading to new pedagogies in the future.

• WWYPSD? What will peer institutions
do? Circumstances differ, even among
academically similar universities. Columbia and
Harvard are embedded in dense urban ar-
eas that are world travel portals—and New
York and Boston became intense COVID-19
hot spots, with widespread infections and
mortality. Employees in both cities depend
on old public transit systems to get to work.
Yale, Brown, and Penn appear less acutely
affected, as does Stanford, given California’s
swift response to the emerging pandemic.

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Yesterday’s News

From the pages of the Harvard Alumni Bulletin and Harvard Magazine

1935 The Summer School hosts multiple discussions of national educational policy, the editors report, noting “signs that academic freedom may become a central issue in a modern struggle as momentous as the earlier struggles in this country for the principle of liberty.” They encourage “bring[ing] into schools and colleges a closer contact with the realities of life. Quacks and nostrums still succeed…despite advances in the social sciences, there is no safeguard in the general mind against the demagogue, the jingo, or the maker of false economic promises. Nor have the natural sciences routed superstition. Those who still believe that the truth has a least some part in making human beings free have much to do in seeing to it that the truth is widely known.”

1940 Harvard sets up a summer aviation camp at Plymouth, offering students a chance to earn private pilots’ certificates from the Civil Aeronautics Authority.

1955 Helen Keller ‘04 becomes the first woman to receive an honorary degree from Harvard. Her fellow honorands include Andrew Wyeth, Archibald MacLeish, West Germany’s chancellor, Konrad Adenauer, and Harvard’s president emeritus, James Bryant Conant.

1960 The Faculty of Arts and Sciences establishes a new degree, A.B. in Extension Studies, to replace the Adj.A. (adjunct in arts) previously awarded.

1970 The Faculty of Arts and Sciences resoundingly votes down the so-called Princeton Plan already adopted by 15 other universities: a proposal for a two-week recess during the fall so students may participate in political campaigns.

1990 Widener Library will require stack users to sign in “after an unidentified vandal mutilated more than a hundred books and a phone message threatened physical harm to anyone who interfered.”

2010 The Medical School updates its conflict-of-interest policies, prohibiting faculty participation in industry-sponsored speakers’ bureaus and limiting industry funding for continuing medical-education course content.

Addressing Climate Change

Even as the University operated remotely during the second half of spring term, it announced new measures to address the other great global challenge, climate change. In an April 21 announcement tied to the fiftieth anniversary of Earth Day, Harvard unveiled an initiative to make the endowment’s assets “net-zero”—meaning the holdings would contribute no overall release of greenhouse gases—by 2050. The plan depends on significant advances in research and portfolio management (and, of course, in the operations of the companies and technologies in which the endowment might invest).

The announcement was framed as a broader response to the Faculty of Arts and Sciences’ (FAS) February vote calling for divestment from investments in enterprises that produce fossil fuels (for background, see harvardmag/fas-divest-


Overseers’ Leaders
R. Martin Chávez ‘85, S.M. ‘85, has been elected president of the Board of Overseers for the 2020-2021 academic year, and Beth Karlan ‘78, M.D. ‘82, will serve as vice chair of the executive committee. Chávez, a computer scientist, served as co-head of the securities division, chief financial officer, and chief information officer of Goldman Sachs, where he remains a senior director. Karlan is professor of obstetrics and gynecology at UCLA’s Geffen School of Medicine, and directs the cancer population genetics program at the university’s cancer center. They succeed Michael Brown ‘83, J.D. ‘88, and Lesley Friedman Rosenthal ‘86, J.D. ‘89, respectively.

Dental Dean
William V. Giannobile, D.M.Sc.-S.D.M. ‘96, has been appointed dean of the Harvard School of Dental Medicine, succeeding Bruce Donoff, who concluded 28 years of service at the end of 2019.

Design Dean’s “Step Back”
Graduate School of Design dean Sarah Whiting, at her post since last July, told her colleagues that she had been diagnosed with non-Hodgkin’s lymphoma. Her April 6 message to the community said that she would take “a partial step back” from daily responsibilities to begin treatment, with professor of urban design and planning Rahul Mehrotra serving as dean designate and professor of landscape architecture Niall Kirkwood continuing as associate dean for academic affairs. Details are available at harvardmag.com/gsd-dean-leave-20.

CLASS DAY CREATIVITY. On Wednesday afternoon, May 27, M.Arch. candidates from the Design School who were still in town arranged themselves on the (otherwise deserted) Widener steps for an impromptu class photo: the first with social-distancing strictly observed, and everyone properly face-masked. The idea was Jessica Lim’s (front and center, in green).

Athletics Director
Erin McDermott has been appointed Nichols Family director of athletics, effective July 1, succeeding Robert A. Scalise, who had announced his retirement after 19 years in the position. McDermott, who was captain of the women’s basketball team at Hofstra, has previously held sports-management positions at Columbia, Princeton (where she was deputy director of athletics), and, most recently, at the University of Chicago, where she was director of athletics and recreation, overseeing 20 intercollegiate sports and more than 40 club sports. For further information, see harvardmag.com/mcdermott-ad-20.

Humanities Transition
Porter professor of Medieval Latin Jan Ziolkowski, who has served as director of Dumbarton Oaks, in Washington, D.C., since 2007, will step down on July 1, and will serve as a member of the Institute for Advanced Study at Princeton. Thomas B.F. Cummins, Dumbarton Oaks professor of the history of Pre-Columbian and colonial art, will serve as interim director. During Ziolkowski’s tenure, Dumbarton Oaks undertook significant physical renovations to accommodate and house its academic fellows and interns, enabling it to increase the number of fellows by 25 percent—at a time when humanities positions have dwindled nationwide. He also established undergraduate and graduate residencies and internships, built ties to local public schools, enhanced access to the collections, and launched the Dumbarton Oaks Medieval Library, now numbering more than 60 volumes (see “Mysteries and Masterpieces,” January-February 2012, page 48).

Economist’s Global Reach
Zombanakis professor of the international financial system Carmen M. Reinhart, who joined the Kennedy School faculty in 2012, has been appointed chief economist of the World Bank, effective June 15. She assumes the post at a time of unprecedented turmoil in parts of the global financial system, and of worldwide recession stemming from the coronavirus pandemic—with especially dire threats to developing nations. She is best known to the public as coauthor, with Cabot professor of public policy Kenneth S. Rogoff, of This Time is Different: Eight Centuries of Financial Folly (see “Dealing with Debt,” July-August 2015, page 10).
Sexual-Misconduct Rules
The U.S. Department of Education in May promulgated new regulations governing how colleges handle sexual-assault and harassment allegations. The regulations narrow the scope of complaints that must be investigated; require that live hearings be held; and allow cross-examination during adjudication of complaints. Proponents say the new regimen restores fairness to a process that has unfairly disadvantaged those accused of sexual misconduct; critics say that it will discourage victims from registering complaints. The rules take effect August 14. In a statement, President Lawrence S. Bacow noted that during the rulemaking process, Harvard, through higher-education associations, had commented on “various aspects of the proposed changes, including areas that we believed might limit our ability to provide a safe and welcoming environment on our campus.” Now, he said, the University would “explore any changes needed to adhere to current federal and state law.”

National Academicians
Eight faculty members have been elected members of the National Academy of Sciences: Dennis Gaitsgory, Smith professor of mathematics; Joel F. Habener, professor of medicine; Michael Kremer, Gates professor of developing societies (who shared the Nobel honor for economics last year); Judy Lieberman, professor of pediatrics; Margaret S. Livingstone, Takeda professor of neurobiology; Wilfried Schmid, Robinson research professor of mathematics; and Suzanne Walker, professor of microbiology.

Top Teachers
The Faculty of Arts and Sciences conferred its awards for teaching and mentorship during the final regular faculty meeting of the year, on May 5. Five-year Harvard College Professorships—for distinguished undergraduate teaching and advising, and graduate education (and accompanied by support for research and a semester of paid leave or summer salary)—were bestowed on: Katia Bertoldi, Danoff professor of applied mechanics; Glenda Carpio, professor of English and of African and African American studies; Cassandra Extavour, professor of organismic and evolutionary biology and of molecular and cellular biology; David S. Jones, Ackerman professor of the culture of medicine; and James Robson, Krailk and Lou professor of East Asian languages and civilizations. The complete list of honorees appears as a sidebar to harvardmag.com/remote-fasmtg-may-20.

Nota Bene
Old museum made new. The Harvard Semitic Museum, established in 1889, has become the Harvard Museum of the Ancient Near East, announced director Peter Der Manuelian, who is Bell professor of Egyptology (see harvardmag.com/near-east-museum-stela-17). The rebranding is meant to explain the holdings and scholarly purposes more accurately, he explained.


A community coronavirus casualty. Alfred “Fred” Joseph Iannacone Jr., proprietor of the Central Barber Shop, on Massachusetts Avenue hard by Harvard Law School and much of the engineering and applied sciences faculty, died April 20, at age 78, from COVID-19. He ran the shop for more than 50 years, according to family members’ account. Tarr Family professor of bioengineering and applied physics Kit Parker recalled, “Back when I had hair…Fred used to cut my hair.” The shop, he said, was central to the small businesses that serve the Harvard community—and “Fred was a really good dude among all of them.”

Radcliffe’s Virtual Fellows. The Radcliffe Institute for Advanced Study has announced its 42 fellows for the 2020-2021 academic year. The fellowship seems likely to be conducted virtually, but nine Harvard appointees will presumably be nearby: professor of government Christina L. Davis, professor of computer science Cynthia Dwork, assistant professor of education Jarvis R. Givens, professor of health policy David Hemenway, Burbank professor of political economy Torben Iversen, assistant professor of art history Shawon Kinew, professor of studies of women, gender, and sexuality and of African and African American studies Robert F. Reid-Pharr, The Custodian of the Two Holy Mosques professor of Islamic legal studies Kristen A. Stilt, and Robinson professor of mathematics Lauren K. Williams. Further details are available at harvardmag.com/rias-fellows-20.

Miscellany. The College has appointed Sheehan Scarborough ’07, M.Div. ’14, senior director of the Harvard Foundation, to succeed the late S. Allen Counter. Scarborough has been director of BGLTQ student life since 2016…Leah Rosovsky ’78, M.B.A. ’84, Harvard’s vice president for strategies and programs from 2013 to 2019, has been appointed the seventeenth director of the Boston Athenaeum, the 213-year-old library, archive, museum, and reading room…The Manhattan Institute has conferred its Hayek Book Prize on the late Alberto Alvesina, Ropes professor of political economy, and his coauthors, for Austerity: When It Works and When It Doesn’t, reviewed in this magazine (“Uses—and Abuses—of Austerity,” January-February 2014, page 63). Alesina died of a heart attack on May 23.
debate-feb-20)—and drew on some of the ideas broached in faculty discussions leading up to that motion. The initiative also comes as petition candidates campaign for election to the Board of Overseers on a platform of divestment and other changes in investment policy. (Voting, as reported in “Divestment Digest,” May-June, page 25, has been delayed until this July, to accommodate effective distribution of ballots that may be delayed in the mail or delivered to offices vacated during social-distancing; see page 50 for information on the aspirants.)

• Toward a “net-zero” endowment. The Corporation has directed Harvard Management Company (HMC) “to achieve net-zero greenhouse gas (GHG) emissions by 2050”—a goal that Harvard believes is consistent with the Paris Agreement on addressing climate change. This charge and the underlying mechanics are described in an HMC “portfolio commitment” (available at hmc.harvard.edu/content/uploads/2020/04/Net-Zero-Commitment.pdf) as part of “HMC’s holistic approach to managing sustainability considerations, consistent with its fiduciary duty to manage risks and achieve target investment returns.” The commitment envisions HMC collaborating with asset managers “to emphasize GHG emissions reduction outcomes in the real economy” and “with peer institutions who have made or are interested in making a similar commitment.” Success is conditioned on governments living up to their Paris commitments; and “perhaps most important, a net-zero portfolio, no less a net-zero economy, will ultimately require important scientific advances and structural change in both the economy and consumer behavior.”

Fulfilling the commitment will take work. The document notes that as a limited partner in funds managed by external investment professionals, HMC “by definition and design, has little role in the day-to-day operations of the fund and its investments.” But as a large institutional investor and “valued thought partner to our external managers, Harvard does have the opportunity to influence” their approach to climate risk.

Doing so, in turn, will require collaborating closely with external fund managers “to achieve the necessary portfolio transparency,” as well as collecting data and creating methods to generate “the most accurate picture of the endowment’s carbon footprint.” Determining a methodology to assess portfolio emissions, applying it across the universe of investment managers; engaging them and the underlying companies in which they invest to mitigate climate-change risks; and, ultimately, reducing GHG emissions “will take extensive study, thoughtful deliberation...and, most importantly, time.” HMC is to report on its initial progress by late 2020; the document notes the Paris Agreement requirement to set emission targets for 2025, 2030, and 2040, with
Far more to perpetuate that supply—and continue to invest in the very productive, to pursue a decarbonized investment: “It is incongruous, if not counterproductive, to pursue a decarbonized investment policy and its implementation—an overlay beyond earning targeted returns within acceptable levels of risk.

But the devil is in the details. In a response to Bacow, core members of the faculty divestment group declared that, “while the path is the right one, the pace is too slow. The goal of a carbon-neutral portfolio by 2050 is simply not ambitious enough”—and included some specific, interim goals for each decade in a separate document. They also continued to criticize the stance on divestment: “It is incongruous, if not counterproductive, to pursue a decarbonized portfolio while continuing to invest in the very companies that supply the carbon and...do far more to perpetuate that supply—and the demand for it—than to reduce it.” That said, they were “greatly encouraged” by this rethinking of investment policy: “It augurs well for constructive action across the University to address the climate crisis.”

Student activists wrote that “Harvard has finally acknowledged that its investment strategy must play a role in mitigating the climate crisis,” but called the net-zero commitment “insufficient” for permitting continued investments in fossil-fuel enterprises; allowing the University “a wide margin to calculate portfolio emissions however it chooses”; and setting a “far too protracted” timeline. “As the world burns,” they concluded, “Harvard continues to defend the arsonists.” A subsequent letter, signed by student and alumni divestment advocates, the Harvard Forward candidates for Overseer, and others, endorsed by the faculty divestment group, called the University plan “radically insufficient.”

The Overseers’ election. Alumni can weigh in on these issues directly as they vote for Overseers this summer. The pandemic has, for now, shut down Harvard Forward’s global gatherings to gather votes for its petition nominees (who advocate divestment and an array of Harvard governance reforms—read details at harvardmag.com/overseer-slates-20). In the meantime, it is posting statements of support on its website, headed by former U.S. vice president Al Gore ’69, L.L.D. ’94, and author Bill McKibben ’82, co-founder of 350.org, which has spurred much of the campus divestment movement (and other climate-change activism) nationwide.

Not coincidentally, Harvard Forward’s organizers chose Earth Day to unveil a clone, Yale Forward, backing the candidacy of Maggie Thomas, a 2015 graduate of the Yale School of Forestry & Environmental Studies, for election to that university’s corporation. (She was a climate adviser to Governor Jay Inslee and Senator Elizabeth Warren during their campaigns for the Democratic presidential nomination.) Significantly, the Yale Corporation, unlike its Harvard counterpart, has some trustees elected by alumni—and is the fiduciary, decisionmaking governing board in New Haven. In that regard, of course, it plays the same role as Harvard Corporation, not the advisory and oversight responsibilities that are the province of the Board of Overseers.

Thomas and Yale Forward must gather 4,394 nominating signatures by October 1 to qualify her for the spring 2021 vote. If they succeed, both institutions’ alumni will have some say on how they wish their alma maters to address global warming.

~Marina N. Bolotnikova and John S. Rosenberg

The Undergraduate

Point of No Return

by Julie Chung ’20

Soon after the Harvard community was upended and scattered around the world by the COVID-19 evacuation, I called my two roommates. Pre-move-out, whenever I felt like my world was falling apart, I could always depend on returning to our room in Adams. The worn wooden floors, beautiful crown molding, and fireplace made the space look reliably ancient, like an antique heirloom passed down for generations. My roommates, Sunday and Catie, and I would sip from mugs of herbal teas on those cold Cambridge nights and snuggle together on our beloved, faded floral futon. I could always count on Sunday’s perspective to ground me, or at least tame my overzealous drive to work. Catie and I often had long, philosophical discussions about the meaning of work, school, and service that left me satiated with introspection.

Even without the physical comforts of our dorm room, I was happy I could still call them from my home in California. I couldn’t wait until all of this was over so that we could all...

So that we could all what? As graduating seniors, we weren’t returning to campus. We weren’t really returning to anything, since we’d been thrust peremptorily into the uncertainty of postgrad life.

In some sense, college is structured as
an incubation period. You enter this vault, and the controlled conditions protect you as you mature, ready to enter the postgrad world. That expected incubation period lasts around four years. COVID-19 has an incubation period of only five to 14 days. Maybe that short turnaround explains why we were unprepared for the jarring mid-spring-semester transition out of college.

Or maybe it’s the fact that the class of 2020 lacked closure for our undergraduate years. It’s as if the transition to “Zoom school” overshadowed our transition from Harvard. My partner, Liren Ma ’20, says, “I feel lost in a void between point A and B. It’s like I got stuck in the middle and don’t know how to get back.” But if there’s not even a “going back,” where do we go?

A few friends and I started a book club to keep in touch after we were dispersed to our different time zones and homes. First on the list, per my request: anthropologist Anna Lowenhaupt Tsing’s The Mushroom at the End of the World: On the Possibility of Life in Capitalist Ruins. This patchwork of narratives traces the globalized commodity chains of matsutake, the world market’s most valuable mushroom. The stories helped us think through precarity, the defining condition of our time. “Post-industrial ruins,” including shuttered factories, economic catastrophes, and climate change, all make the present moment a ripe time for sensing precarity, Tsing writes. If we ever felt caged by too much stability, it now seems that many of us face indeterminate and troubling futures. And it also seems we are at a loss for narrative happy endings. Our “handrails of stories” about stability and progress—which “once made us think we knew, collectively, where we were going”—are gone, she writes. How do we imagine living without those handrails?

Many of us lack them now. According to an April 2020 survey, more than half of Los Angeles County residents were unemployed due to the coronavirus crisis. My parents, among millions of other workers in this country, have suddenly lost their income. My sister and I delivered groceries to my grandmother a few weeks after the stay-at-home order in Los Angeles. She lives in a Section 8 apartment unit in the heart of Koreatown, where my family’s former acupuncture clinic and other small-scale business buildings were torn down and rapidly replaced by luxury apartments during the past decade. It can sometimes seem only a matter of time before her own apartment will be demolished as well.

As Tsing says, living life without handrails amid economic uncertainty can make us more attuned to precarity and risk. When discussing our postgraduate plans over the phone, my partner told me, “I probably value having a secure job more highly than I would have if not for the impending economic crisis. You don’t want to take as many risks now.” The postgraduate job market looks bleak for many seniors. On top of the difficulty of simply coping, my roommate Sun-ny, a budding clinical psychologist, has been struggling because most labs have scaled back their work and aren’t looking to hire.

Of course, some of my peers will be starting jobs with six-figure salaries that they had secured after junior year. “I know people that did recruiting and still have those jobs,” my other roommate, Catie, said. But even graduates with economic security might have other risks to worry about, including sick family members and loved ones. “There’s an aura of uncertainty that unites everyone but is manifesting in different ways for different people and in different realms of life,” Catie reminded me.

Security and safety are often compelling justifications for Harvard graduates to enter careers that offer obscenely high salaries—perhaps even compelling enough to enter corporations with practices that make them uncomfortable. The decision to attend Harvard itself is often a step toward security, as in my case—a way, perhaps, to uplift my immigrant family. I understand it: when life seems so precarious, I often find myself grasping for handrails.

But maybe there’s an alternative to those norms of security and safety that have diverted our attention from other directions. Tsing points to the matsutake to illuminate alternative paths for survival on our precarious, damaged planet. Matsutake production and commerce take her readers to unexpected places, including human-disturbed and -damaged forests in Oregon, Japan, and Yunnan. Matsutake thrive in our ruins. It is said that when Hiroshima was destroyed by an atomic bomb in 1945, a matsutake mushroom was the first living thing to emerge from the blasted landscape. Yet matsutake survive only because of their dependence on multispecies collaborations. Rather than the lone-wolf-against-the-world model, survival is about connection, interdependence, and relationships. How can we survive together?

I can feel frivolous, sometimes even guilty, when thinking during this crisis about what lies ahead for me. My Harvard degree will always give me immense privilege when navigating the job market. I’m so lucky that I’m in good health, have enough food to eat,
**SPORTS**

**All in Her Head**

Diver Georgina Milne pictures a post-pandemic return.

Georgina Milne ’21 stands straight, preparing to execute a daunting front three-and-a-half tuck. One of the country’s best collegiate divers from the three-meter springboard, she knows the seven half-rotations will take unwavering focus, tight execution, and serious core strength.

Milne focuses on the little things. As she finishes her hurdle to the front of the board, she points her arms straight up—mindful of her tendency to arch them forward. She aims to leap from the sweet spot where she’ll achieve the ideal balance of spring and stability. She tightens her core and leaps into the air with her toes pointed, flying up and away from the board and down toward the water, hoping to enter with a clean puncture.

But it’s all in her head. Milne, forced off campus by coronavirus, does all this in her living room. In Concord, North Carolina, about 800 miles from Cambridge, she visualizes the dive in slow motion, imagining each grab, twist, and extension. In March, she had been preparing for the NCAA swimming and diving championship. With the meet canceled and facilities closed, her routine has changed. Instead of heading out to a pool, she spends time at the one in her head.

Visualization has always been key to Milne’s training. Unlike many divers who and will likely be okay coming out of this pandemic. In late April, after months of uncertainty, I found out that I’d been accepted for one international and one domestic fellowship. I could travel to South Korea to conduct research and learn Korean, enabling me to connect with my heritage and extended family members after 18 years of separation. Or I could do community-service work in California related to food justice—issues that seem especially salient now, given the unprecedented levels of food insecurity all over the world.

But given the state of international travel, I don’t know if I’ll be able to go anywhere for the rest of the year. And my priorities are shifting. I’m sure there was a time when I thought going abroad would be the perfect way to spend the brief and exciting years immediately following graduation. While postgraduate wanderlust should carry me away from home, I can’t shake off the startling news we get every day about “essential” workers who lack proper health insurance and protective gear, and families going without food due to rising unemployment and disrupted supply chains—or my own family’s efforts to manage.

It can feel like the world is falling apart. But I do not find myself grasping in the dark to turn on the light switch—or to find the handrails. I am grasping to feel the edges, imagining a new space with contours that lead to unexpected avenues. Arundhati Roy writes: “Our minds are still racing back and forth, longing for a return to ‘normality,’ trying to stitch our future to our past and refusing to acknowledge the rupture. But the rupture exists. And in the midst of this terrible despair, it offers us a chance to rethink the doomsday machine we have built for ourselves. Nothing could be worse than a return to normality.”

Although it sometimes feels as though my future is falling apart, I now see that—rather than unraveling—it’s becoming a spinning vortex that’s converging into a point: a source that sucks shut my other fears about risk and uncertainty. The pandemic has cleared the smog from cars that normally chug through traffic on Los Angeles highways. It’s given the city the clearest skies we’ve seen, breathed, and smelled in decades. This is the clarity that guides my journey into life after graduation, as I continue to imagine the world that I want to live in.

Berta Greenwald Ledecky Undergraduate Fellow Julie Chung ’20 is providing food relief to families and learning about food sovereignty in her hometown of Los Angeles.

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arrive at the sport from a gymnastics background, where aerial flipping and tumbling are routine, Milne jumped straight to the water. As a second-grader in New Albany, Ohio, at her once-a-week afterschool diving program, she could wrap her mind around the pipe jumps, tuck jumps, and dives, but the front flip seemed impenetrable. “I just remember being so terrified,” she says. “I think the fourth- and fifth-graders were more aware of their bodies and able to figure out how to do it. I think my issue was I just had no idea.”

When she was eight, she and her family moved to Seattle, where she joined a new club. Soon, the front flip was a piece of cake, and Milne had a new challenge: the front one-and-a-half. This time, instead of landing feet first, she’d have to kick out and reach toward the water after a mid-air rotation.

Her coach, Chris Miller, had a way of making these challenges fun. “I think it was Chris who made me fall in love with the sport,” she says. “Any coach wants you to get better, but he had this way of making us feel really good about trying new things.”

But for this daunting move, a nine-year-old Milne felt she needed an extra push. Frustrated, she complained to her mother about her struggles.

“Well, what do you think would help you?” her mom asked.

“I just wish Chris would yell at me more!” Milne responded.

“And so the next day, my mom went up to him and said, ‘I have a strange request,’” Milne remembers. “My daughter wants you to be harder on her.”

Some of the more high-tech diving organizations have fancy equipment that helps divers test new moves—trampolines, harnesses, pulley systems for mid-air acrobatics. Seattle’s didn’t, so Miller had the team practice a lot of visualization and “lead-ups.” If Milne was trying to learn a front one-and-a-half, she could think through the familiar motion of the front flip, and then imagine a routine front dive. On the diving board, she’d do both separately, repeatedly. Then she’d put them together.

As things turned out, Miller didn’t have to yell for Milne to nail the front one-and-a-half. With her love for the sport growing, it was only a matter of time. “There’s kind of this rush you get when you’re diving and you try a dive you’ve never done before,” she says. “You just get these butterflies in your stomach. And I think I just really loved that feeling.”

By the time Milne arrived in Dallas at age 11, her diving foundation was strong. Though her father’s retail architecture job spurred the move, the family landed close to GC Divers, one of the best clubs in the country. With more intense training and better facilities, Milne quickly improved. She was devastated when her family had to move again, leaving her reigning national championship team as high school began, but they returned to New Albany, near the club that had finished second. “Honestly, at this point, I feel like I was able to stick with diving because of the circumstances of luck,” Milne explains. “Kind of always moving to the next best thing.” The following year, her new team would win the national championship.

In high school, practicing five or six days a week, sometimes for more than five hours at a time, she began qualifying for regionals and nationals. The only problem was, she wasn’t a U.S. citizen. (Her parents are British and South African.) She could compete at regionals, but nothing beyond. Instead, she competed in the 2014 South African junior national championships, qualifying for the junior world championships. She got her citizenship in 2015, but again competed for South Africa in the 2016 World Junior Diving Championships.

But when Milne arrived at Harvard, her progression hit a hitch. For most of her life, the focus had been solo: she had been part of a team, but the pressure didn’t extend beyond herself. “But coming to Harvard from the get-go it was like, ‘You are a part of something bigger than yourself,’” she explains. “And, ‘You have a role to play on this team.’” Milne couldn’t quite figure out how the team’s energy played into her performance. She knew her scores affected how the team placed, but she continued approaching her dives individually. At meets, she could hear her teammates cheering, but instead of channeling the energy toward her dives, she let it turn into excess pressure. With an overactive mind, executing proved difficult. Between the team adjustment and transition to campus life, she felt lost, performing poorly and almost missing out on a team spot at the 2018 Ivy championships. “It was kind of a blur to me. I just had no idea what was going on,” Milne says. “I sort of didn’t put enough of my mental energy into the sport.”

Her sophomore year, things improved. She began to appreciate the team element—the high fives, the team celebrations. As she approached the board for a dive, she would look at her teammates and try to feed off their energy and support. When things clicked mid-season, Milne went on a tear, eventually earning a berth at the 2019 NCAA championships—a result that would have shocked anyone who had seen her perform freshman year.

Her 2020 season was even better. The new diving coach, Matt O’Neill, approached the sport with a level of joy that Milne hadn’t seen before. “Sometimes, at the end of practice, he’d say, ‘Okay, go spend five minutes doing whatever you want, but whatever it is, it needs to be fun,’” Milne says. Surrounded by a supportive team and thriving on the energy of her new coach, she won the Ivy title on three-meter board and placed fourth at the NCAA Zone A Diving Championships. She’d been happy just to qualify for the NCAA championships in 2019. In 2020, she wanted to make a statement.

She wouldn’t get the chance. Coming home from West Virginia after the Zone A Championships in Morgantown, the coaches received an email from Harvard athletics letting them know they couldn’t compete at NAAs. Milne was heartbroken. “But seeing how hard it was for Matt to tell us, I thought, ‘It’s okay,’” Milne says. “It’s something we can’t control.” The following day, the meet was canceled.

At home in North Carolina, Milne chooses not to focus on what’s been taken away from her: her gym, her pool, her teammates. Instead, lying on her living-room floor, mentally completing dives she doesn’t have the chance to try, she’s trying to master the art of visualization. When pools reopen and she gets back on the diving board, she’ll be ready for what’s next. She can picture it.

~JACOB SWEET
"From Neither Here Nor There"

Sociologist Roberto Gonzales on the predicament of undocumented young people

by LYDIALYLE GIBSON
The penultimate chapter of sociologist Roberto Gonzales's book *Lives in Limbo*—the chapter he calls the most painful and gripping to read, the one that would be its climax, if the book were a work of fiction—opens with a story about two factory workers on an auto-parts assembly line. The men are friends, both in their late twenties, and both undocumented immigrants. Like everyone else in Gonzales’s book, they’ve spent most of their lives in the United States. One of them, Jonathan, never finished high school, while the other, Ricardo, has a college degree in political science and a master’s in management. “He shouldn’t even be here,” Jonathan says, sitting at a lunch table in the factory’s crowded break room. But Ricardo disagrees. “You see, this right here is where I’m supposed to be,” he tells Gonzales. “It’s probably where I’ll be in five years.” He has figured out what Gonzales’s research notes have inexorably begun to show: that no matter what his education, or talent, or work ethic—or intrinsic “Americanness”—the thing that defines his life is his illegality.

An ethnographer as well as a sociologist, Gonzales is a professor of education and director of the Immigration Initiative at Harvard. He studies the lives of young undocumented immigrants like Jonathan and Ricardo, people who were brought, or sent, or smuggled into the United States as children, often before they were old enough to remember, and who then grew up here, in a state of perpetual in-between. His phrase for this kind of existence is, “Ni de aquí, ni de allá”: from neither here nor there. He has spent two decades (three, if you count his previous life as a youth worker in Chicago’s immigrant neighborhoods) amassing arguably the world’s most comprehensive data set about a population that, up until then, had never been closely studied.

Gonzales lays out this data in *Lives in Limbo: Undocumented and Coming of Age in America*, published in 2016—although, truthfully, data feels like too narrow a word. “At its heart, this research is about stories of belonging and wanting to belong,” writes Jose Antonio Vargas in the book’s foreword. A Pulitzer-winning journalist and immigration activist, Vargas is himself an undocumented immigrant. “Alexia, Chuy, Pedro, Gloria, and the others in this book are real people whose lives have been profoundly shaped by our complex and unpredictable immigration system.”

The research for *Lives in Limbo* began in 2002, when Gonzales embarked on what would become a groundbreaking 12-year study, closely following the lives of 150 young people in Los Angeles who had grown up in America but were here illegally. The vast majority were born in Mexico; when Gonzales first encountered them, they were somewhere in their twenties, and from his rich narratives of their unfolding lives, a complex picture emerges. At first, and for a long time, their experience of life in America seemed to be one of inclusion. A 1982 Supreme Court decision, *Plyler v. Doe*, permitted undocumented immigrants to attend public K-12 schools—“the most powerful institution for their age,” Gonzales says—and that mandate came to include after-school programs and summer activities. Undocumented children play sports and join clubs with their American-born classmates. “There are really no restrictions,” Gonzales says. Absorbing American sensibilities and aspirations, the idea of the American dream, they become cultural citizens, if not legal ones.

The crash comes in stages. Perhaps in early high school, they apply for driver’s licenses, or summer jobs, and discover they cannot get one without a Social Security number. For many, Gonzales found, the news that they are not legal residents comes as a shock. A few years later, applications for college, or for financial aid, present similar problems. The vise starts to close. As their American friends move forward into post-secondary education and careers and households of their own, most undocumented young people find themselves tripped up again and again—and in the end, permanently—by the limits of their immigration status. “The transition to illegality,” Gonzales calls this process. One of the young women he interviews has another name for it: “waking to a nightmare.”

Over time, Gonzales watched the group of 150 split into what he terms “early exiters”—people like Jonathan who never made it past high school, because of poverty or disillusionment or the raw demands of survival—and “college goers” like Ricardo. These divergent paths launch young people on starkly different trajectories throughout early adulthood, but by the time they reach their thirties, Gonzales found, those trajectories converge. And so it was that Jonathan and Ricardo were eating lunch together in the break room of the factory where they both were paid in cash for work that was backbreaking and mind-numbing, surrounded by the chatter of their immigrant co-workers.

“Hustling for a dream”

*Lives in Limbo* cemented Gonzales’s academic reputation. The book won the 2016 C. Wright Mills Award from the Society for the Study of Social Problems, a prize named after the postwar American sociologist who insisted early on that social scientists should not merely be theoreticians and disinterested observers, but moral actors bearing social responsibility. Other honors rolled in from academic organizations across a range of disciplines: anthropology, social work, educational research, law and society. “The most important thing I can say about Roberto is, read that book,” says Donald Graham ’66,
Undocumented immigrants are “arguably more vulnerable now than at any point when I’ve been doing this research,” Gonzales says.

the former longtime publisher of The Washington Post, who co-founded TheDream.US, an organization that provides college scholarships to undocumented students. “As a very old-fashioned American, somebody who believes in this country, Lives in Limbo is very hard reading. But it’s important reading. Roberto makes clear how truly impossible the situation of undocumented families is.”

The response from young undocumented immigrants themselves was even more powerful. People whom Gonzales had never met wrote and called, wanting to share their own stories of growing up in-between. Four years later, they still do. Those who had been his research subjects wrote and called too, asking when the book might be translated into Spanish: they’d been reading it to their families, they told him, so their parents could better understand what they’d been through. “Because, see, the road they travel is so different from their parents,” Gonzales says. “Adult migrants have a very consistent experience with being undocumented.” Exclusion, for them, is the starting point. “As soon as they arrive, they’re learning the rules of this country, what it will take for them to get home safe at the end of the day, to feed their families, to stay hidden, to keep quiet.” A lot had been written about that experience already. Now, for the first time, their children saw themselves reflected back.

It felt that way for Vargas. He was 12 years old when his mother put him on a plane from the Philippines to California, where his grandparents, both U.S. citizens, were waiting for him. Now 39, he has not seen his mother since that day. He spent his adolescence in Mountain View, and for him the waking-to-a-nightmare moment came at 16, when he presented what he thought was a green card at the DMV to apply for a driver’s permit and was told it was fake. He remembers tearing home on his bicycle to confront his grandfather about the lie.

Vargas managed to hide his undocumented status until he was almost 30. He finished high school and went on to college and then found a job at The Washington Post, where he won a Pulitzer covering the 2007 school shooting at Virginia Tech. In 2011, unable to bear the strain of his dual life any longer, he “came out” as undocumented in a New York Times Magazine essay and started a nonprofit, Define American, which advocates for immigrant rights and a rethinking of national identity. “I think when we look back at this time,” he says, “Lives in Limbo is going to be one of those landmark pieces of work that you can give to somebody, a grand-niece or grand-nephew, and say, ‘Look, this is what happened.’ In some ways, Roberto is chronicling one of the most important stories of modern American history.”

It felt that way for Karla Cornejo Villavicencio ‘11, too. Now a Yale Ph.D. student in American studies whose first book, The Undocumented Americans, came out in April, she was one of the first undocumented immigrants to graduate from Harvard. Back then she felt trapped, alone, and invisible on campus. The mental-health toll of that experience, and the deep depression and anxiety it triggered, took years for her to understand. Gonzales’s work helped. “I felt so seen through his research,” she says. Most other books she’d read on immigrants seemed written for someone else. But with Lives in Limbo, “I read that, and I thought, ‘That’s what I was going through.’ I had spent my entire life hustling for a dream, trying to get out, trying to save my parents, and then I made it to Harvard, and”—like so many of his research subjects—“I knew I was about to crash.” Even with an Ivy League degree, she had reached a familiar precipice: her undocumented status, she knew, would put most jobs—and every good job—out of reach. “Honestly, I just felt so lost.”

“A claim to personhood”

Depressed, anxious, lost. One unanticipated but unsurprising through line in all Gonzales’s work, from Lives in Limbo to his current research—to his teaching at Harvard, which centers in part on the educational needs of undocumented immigrants—has been the psychological and physical consequences of living without legal status. In the book, he describes a whole constellation of maladies, which he came to recognize, he writes, as symptoms typically linked to unresolved grief: headaches, toothaches, ulcers, high blood pressure, insomnia, overeating, undereating, chronic sadness, chronic fatigue. Some respondents drank too much, and others took drugs. One woman told Gonzales that she’d gone to the emergency room with pain so intense it felt like a heart attack. “I was overwhelmed by how consistent these manifestations were, and how severe the suffering,” Gonzales says. “Initially, I didn’t expect this—I was focused on questions of social mobility. But there was no mistaking what was happening.”

The finding was another answer to the question he had started out with: how policy shapes everyday lives. And more recently, he has made it an intentional research focus. Last summer, Gonzales completed fieldwork on a seven-year study of DACA (the Deferred Action for Childhood Arrivals program), which shielded beneficiaries from deportation and granted provisional rights that allowed them to get driver’s licenses, apply for jobs, and go to college. There are now as many as 800,000 enrollees. After the DREAM Act, which proposed a pathway to citizenship, failed in Congress, President Barack Obama launched DACA by executive order in 2012. The idea was to tide things over until legislation could resolve their predicament more permanently; instead, five years later, the Trump administration announced it was ending the program altogether. That decision sparked a flurry of litigation, and late last year, the U.S. Supreme Court heard oral arguments in a lawsuit seeking to preserve DACA. As of press time, a ruling was expected any day.

In 2013, Gonzales and several colleagues surveyed almost 2,700 DACA beneficiaries nationwide, following up in-depth with about 500 respondents in six states: California, Arizona, Georgia, South...
It has been a difficult few years to be an immigration researcher. Immigration bans, deportation raids, and family separations at the border, ever-tightening restrictions on refugees and asylum-seekers and green-card applicants: President Donald Trump’s agenda on immigration has been his most consistent pursuit since taking office, sometimes dramatically so. Immediately, people started getting driver’s licenses and health insurance. They opened credit-card and bank accounts; they started making more money. (Society benefits from having their lives regularized, too.) Just 16 months into the program, 59 percent of respondents reported having found new jobs. “They’re able to chart out occupational pathways that match their education,” Gonzales says. They were able to go from college to graduate school, medical school, law school—trade school. “Even more modestly educated people were finding on-ramps back to GED programs, to community college, to occupational licenses, and using those programs as stepping-stones to better things.” These recipients, he says, are some of DACA’s biggest success stories.

The effects rippled out to families too, as DACA beneficiaries were able to contribute more to household expenses, to rent and mortgages. They were able to drive relatives to and from work. They endured fewer headaches and toothaches, less depression and anxiety. “People felt a greater sense of belonging,” Gonzales says. “Having this identity as a DACA holder allowed them to stake a claim to personhood, to membership in this society.” In 2018, he testified about these findings before the Senate Judiciary Committee.

The other side of all that, of course, was the Damoclean uncertainty that hung over the whole project. “What does it mean to implement a policy that is temporary and partial?” wondered Gonzales. And after DACA’s repeal, he found himself asking an even more profound question: “What does it mean to have an expiration date?”

“An opportunity to fill in a void”
It has been a difficult few years to be an immigration researcher. Immigration bans, deportation raids, and family separations at the border, ever-tightening restrictions on refugees and asylum-seekers and green-card applicants: President Donald Trump’s agenda on immigration has been his most consistent pursuit since taking office, the campaign promise he’s tried hardest to keep. For scholars like Gonzales, it forces a difficult calculation. “On the one hand, there’s a tremendous responsibility to document what’s happening,” he says. But there are new hazards as well. Undocumented immigrants are “arguably more vulnerable now than at any other point when I’ve been doing this research.” Two years ago, Gonzales abandoned a plan to interview parents and siblings of DACA beneficiaries, because it would have meant collecting addresses and beneficiaries, because it would have meant collecting addresses and contact numbers. He decided it wasn’t worth the risk.

At Harvard, meanwhile, the DACA repeal sparked an act of protest that led eventually to the formation of the Immigration Initiative. In early 2018, Gonzales and two colleagues—Winthrop professor of history and of African and African American studies Walter Johnson and professor of history Kirsten Weld—organized a series of seminars with immigration lawyers, activists, educators, undocumented students, and Harvard workers affected by recent changes to immigration policy. The capstone event, in early March, was “A Day of Hope & Resistance”: 12 hours of workshops, discussions, performances, and open-mics, convening at 10 a.m. in Memorial Church and closing with a candlelight vigil and a concert finale. Speakers and performers included Latinx artistic luminaries: hip-hop duo Rebel Diaz, Los Angeles rock group Quetzal, migrant poet Sonia Gutiérrez, feminist rapper Audry Funk, jazz singer Esperanza Spalding, and undocumented immigrant poet Yosimar Reyes.

Turnout was enormous at almost every event. “So that taught us that there was huge interest in this subject on campus,” Gonzales says. And it gave him the idea to try something bigger: in October 2019, the Immigration Initiative launched. Housed at the Graduate School of Education (GSE), it reaches University-wide and rests on three basic pillars: a speaker series; a research fellowship for graduate students working on immigration-related dissertations in fields from education and history to public health and government; and a collection of short issue briefs, aimed at policymakers, distilling academic research on subjects like family separation, toxic stress, and the ripple effects of deportation in schools. Meanwhile, the organization’s website functions as a clearinghouse for other immigration events, performances, exhibitions, and courses across campus, and provides links to student organizations, resources for immigrants, and volunteer opportunities beyond campus.

The initiative also serves another, less overt but necessary, purpose, says research assistant Ariana Aparicio Aguilar, Ed.M. ’19, a DACA recipient born in Mexico City who arrived in California with her family at four and came to Harvard three years ago to study with Gonzales. “It’s an opportunity to fill in a void,” she says, “to back up what the University as a whole is not doing already for undocumented students.”

Some colleges, especially those with larger DACA populations, have stand-alone campus centers for immigrant students, with full-time staff to help the undocumented navigate immigration laws and to connect students to other resources. At Harvard, undocumented students receive assistance from the Harvard Immigration and Refugee Law Clinic at the Law School, and a training program called UndocuAllies works to educate faculty about the basics of helping undocumented students, but that exists only at the GSE, and is run by students, who cycle in and out. Student activists have long argued for more comprehensive resources for the estimated 100 DACA beneficiaries on campus. Gonzales agrees. “We need something more systematic here,” he says, and especially now, with immigrants under greater threat from government policy. “I know it’s hard on a decentralized campus.”

“Some of them would just disappear”
Gonzales’s own family goes back generations in Colorado and New Mexico. He grew up in Colorado Springs, a college and military town on the eastern edge of the southern (please turn to page 65)
Theon, a would-be critic: Callimachus! It’s not often we run into you outside the Library. Have you come to see the victory procession of our benefactor, King Ptolemy? We all enjoyed that *Hymn to Zeus* you wrote about him. “Who should we sing but the ultimate god king, bringer of justice to the children of Heaven.” Isn’t that how it goes? Or are you off to meet a boy in town, the muse for one of those cute but cutting epigrams you’re known for? Or are you just randomly collecting notes for that *magnum opus* of yours? The *Complete Storybook Collection*—wasn’t that what you said it was called?

Callimachus: Delightful to see you. Are you still looking for work? I do love our new Library—it’s really my favorite place. Some people think I’m the head librarian, which is flattering but wrong. I’m happy with my own employment there, the more so for the contrast to my birthplace in Libya. Alexandria suits me, because we get news, and scrolls, from all over the Greek-speaking world. I can live here and write about gods and traditions from all over.

As for your questions, I’ll take those in order. Yes I am. Not quite. If I were I wouldn’t tell you, but you can assume there’s at least one; also, please cool it with the bisexual erasure—I like girls and guys! And I’m glad you like those epigrams, though hymns and epigrams are only two among the kinds of poems I write. And I fancy that when I complete that set of poems about local tales and myths and explanations—*Aetia*, “origins,” like superhero origin stories—that’s going to be an even bigger hit than my collection of epigrams was.

Thanks for your words about the *Hymn to Zeus*, too. It’s a poem about how rulers ought to be, not necessarily how they all are.

Theon: I do see some great opportunities for editorial positions here, although I have to admit I haven’t received a full-time offer yet. Perhaps you could write me a letter of recommendation? Word has it you got your rival Apollonius sent to a tiny island somewhere. And I don’t mean Delos. Actually, didn’t you go to Delos when you were working on your *Hymn to Delos*? How was it there?

But you say you write more than two kinds of poems. That was unheard of in the glory days of Athens. Surely you remember what Plato says about poetry being inspiration, not labor? Doesn’t a god tell you what to do? Isn’t that how poets compose? Or is it because your *Aetia* is all facts, no fiction? Out with the old, in with the older...

Callimachus: A lot of my friends are waiting on full-time offers these days. Before I can agree to support your work I’ll have to write a snarky epigram about it, though. Are you OK with that? I mean, I get that kind of question a lot. It’s not really a question so much as a comet, by which I mean it’s a bad omen all around and draws attention to itself.

I may have gone to Delos, or I may have done really good library research. Smart girls never tell. Wait: not “or”; “and.” I always do my research.

As for Apollonius, we mock each other but we get along. He and I differ a lot about how the best poets work these days, and by “best” I mean “not him.” He’s very old-school and prefers to imitate Homer, which I view as setting yourself up for failure; why not take advantage of the wealth of information we have now and make short or easily segmented, beautiful intricate things rather than unwieldy long ones?

But I’d never get him sent to Rhodes just because his poems are too long (though, granted, they are too long). That would be a jerk move. Don’t people call him “of Rhodes” because his father came from there? He’s Alexandrian. Like me. (Some people call me “Callimachus of Cyrene.” Which is in Libya.)

Oh, and thanks for asking about inspiration (head-desk! head-desk!). I won’t deny it exists, but Apollo favors the prepared mind. There may be poets who composed the way Ion composes in Plato’s dialogue—inspired, with no knowledge that’s truly his own—but I haven’t met them, and they may all have died out. You know what knowledge truly belongs to

**VITA**

**Callimachus**

Brief life of a multifaceted poet: c. 310 B.C.E. - c. 240 B.C.E.

*A Platonic dialogue by Stephanie Burt and Mark Payne*

Ruins of the Temple of Artemis at Ephesus, a wonder of the ancient world. Callimachus honored the goddess with a hymn and shorter poems as well.
poets? Knowledge about the techniques and the history of poetry. (Which, by the way, Apollonius does have. But he’s fun to tease.)

Theon: Speaking of history, you must have been thinking about the future of poetry too. I mean, there’s a lot going on here right now: you, Apollonius, Theocritus—whatever it is he thinks he is doing with those shepherds of his. Imagine a poet looking back at this place from the future. What do you think she would make of it? I mean literally, do you think they will take the stories apart and retell them, or is the magic more at the level of style?

Callimachus: You’re assuming that future poets will read the stories as wholes before they take those stories apart. I’m not sure that’s a safe assumption. If I had to guess, or bet, I’d bet that they’ll get all of Homer, but only bits and bobs of much else, with a full collection here and there, and they’re going to start out confused. If we’re lucky some scholars will try to put it all back together in a sensible, entertaining, knowing way, sort of the way I’m doing with the Aetia, which collects tales from all over, and some poets (maybe they’ll also be scholars; who knows?) will invent new styles to make new wholes.

We’re already doing that sort of thing with Egyptian myths, right? When we find one that fits the divinities and the stories of our Greek-speaking world, we recast it. When we find one that’s completely alien to us, we leave it alone.

I hope that when future readers get my advice, and the advice I convey from gods and heroes and the like, those future readers will be able to tell when I’m being serious and when I’m making fun of someone. Then again, sometimes I’m not sure myself. I have to rely on my sources. They will, too.

I’m afraid I’m getting away from your lovely question. I’d like to conclude by stating overtly what my friends already know implicitly: style is everything.

Theon: Style, yes, that reminds me: the word for “style” is derived from the word for a pen or other writing instrument. How about that for an origin story! It makes me want to get back to my dictionaries. So I think I will do that. It was nice running into you, and I’ll be in touch about that letter.
Diplomacy has never been so important as now, when we are confronting the most serious crises since the Second World War: the global pandemic and economic collapse.

When we emerge finally from the grip of the coronavirus, Americans will need to account for a public-health disaster that has killed well over 100,000 people to date and shuttered nearly every institution in our society (including Harvard) for much of the spring and into the summer.

But we'll also need to look beyond our borders to assess what went wrong globally. Why did the World Health Organization—its long and continuing record of expertise in matters of global health notwithstanding—not press China more aggressively to tell the truth about the virus in early January? How should nations be better prepared for a possible second wave? Can they agree to share a vaccine equitably among the world's 7.7 billion people? Will the major economies collaborate to prevent the current recession from turning into another Great Depression? The answer to these questions will depend in large measure on our ability to work diplomatically across the world in this multi-front struggle.

As a former career Foreign Service officer, I have spent four decades of my professional life representing the United States overseas and teaching about America's role as the indispensable power in the international arena. For much of that time, the nation leaned heavily on its unmatched military might—during the Cold War, after 9/11, and in the Afghan and Iraq wars. Now, with the spread of the coronavirus to every inhabited continent, diplomacy's time has come in the reconstruction of a more stable and better world.

Unfortunately, restoring the role of U.S. diplomacy won't be easy. One early casualty of the pandemic is our plummeting credibility as the unmatched global power. For the first time since World War II, America has chosen not to lead in confronting a quintessentially global threat. With American energy and confidence in short supply, President Donald Trump is a spectral figure on the world stage as nations struggle to contain the virus. Instead of leading the G-20 major economies against the contagion, the world has watched an American president castigate China for birthing the “Wuhan Virus,” pin the blame for the failed response on the World Health Organization, and—as one of my European students lamented—fail even to offer a simple word of sympathy in all those endless news conferences to those dying in Italy and Spain and other bedrock allies.

Former Secretary of State Colin Powell has long maintained that America should place its diplomats out in front (“on point” in the military vernacular), with the armed forces in reserve, to be used only when diplomacy fails. Powell’s dictum is an important reminder of how the United States should seek to lead in this time of pandemic, for the coronavirus is only one of many among a new type of threat that requires us to lead as much through the power of diplomacy as through that of the military.

Many of the students I teach point to transnational threats that affect every nation and person on earth as our greatest challenges: climate change, food and water shortages, narcotics and crime cartels, the lack of cyber security, and pandemics top the list. We cannot succeed in containing them without forming diplomatic alliances among governments, universities, foundations, businesses, and citizens.

This new brand of diplomacy is not an alternative to the military but its logical partner in the twenty-first century American arsenal. The military remains essential to fight terrorists, and to
counter rivals Russia and China and outlaw governments in North Korea and Iran, but even in these cases we have to have robust diplomacy to achieve our aims. Even if we deployed the full might of the U.S. military to eliminate the North Korean and Iranian nuclear programs, and the regimes that support them, does anyone believe that would, by itself, “solve” the problem? Even in those cases, deft, multilateral diplomacy will have to play a lead role—as recent experience has shown. We can no longer default to force alone, as we have done so often since 9/11.

A Foreign Service for 2030

America’s diplomatic effectiveness rests, in large part, on the women and men of the U.S. Foreign Service—more than 11,000 career officials in more than 280 embassies and consulates and at the State Department in Washington, D.C. They are our primary interface with foreign governments, businesses, and citizens. They adjudicate immigrant and non-immigrant visas and refugee admissions to the United States. They help American businesses overcome barriers to foreign trade and investment. They manage difficult war and peace challenges in every corner of the world—from daily challenges to the most intricate, strategic matters vital to our national security and prosperity. Diplomatic collaboration also underpins our ability to advance the more positive scientific, technological, and societal trends that can sustain the historic alleviation of poverty worldwide, promote women’s rights, and realize the promise of a carbon-free economy.

Just when we need to turn to diplomacy, however, the Foreign Service is experiencing one of the greatest crises in its long history. Some of the damage has been caused by prior Democratic as well as Republican administrations. The United States is the only major country that fills a third or more of its ambassadorial assignments with political appointees, often poorly qualified, from outside the career ranks—often depriving the country of the advantages it could secure with expert, professional, nonpartisan diplomatic representation around the world. That mistake has only accelerated, with the current administration appointing the lowest percentage of career ambassadors in more than half a century. Former generals and admirals have been appointed to ambassadorships that would otherwise be filled—as they should be—by civilian officers. The politicization and militarization of our foreign policy by both parties is a genuine problem.

More broadly, the Foreign Service has been substantially weakened and is in need of major repair. Even as the Trump administration’s budget requests for the Department of Defense rose from $686 billion to as high as $718 billion during its first two years, it sought to slash the State Department’s budget by up to a third. The administration fired several of America’s most senior and experienced diplomats early in 2017 and sidelined countless others, triggering an exodus of officers of every rank. The president himself has castigated career diplomats as the “Deep State.” Unsurprisingly, morale has crashed and young Americans’ applications for the Foreign Service have fallen to just under 10,000 from a high of 31,000 in 2003—a worrisome indicator that our nation’s ability to attract superb diplomatic talent is being eroded.

Re-Imagining American Diplomacy

The Kennedy school launched an ambitious, nonpartisan initiative this winter—A New American Diplomacy for the 21st Century—to address these concerns and spark a national conversation about the future of the Foreign Service. I am working with former Foreign Service colleagues, Ambassadors Nancy McEldowney, Marc Grossman, and Marcie Ries, to issue a major public report after the November presidential election.

We have organized online meetings with hundreds of current and former officials, business and nonprofit leaders, and everyday citizens to discuss ways to strengthen the career service.
My experience in government has taught me that diplomacy is most effective when it is cemented in American values and the rule of law.

American diplomacy needs a major generational update. Since 9/11, Congress and three administrations have reformed the U.S. military and intelligence services and created the Department of Homeland Security. But collectively, they did little to re-imagine diplomacy’s role in the American arsenal.

During the last century, there have been just three efforts to modernize the U.S. diplomatic corps: in 1924, 1946, and 1980 (when Congress passed the last major State Department Authorization Act). In our vastly altered geo-strategic environment, 40 years later, it is time to renew the mission of the Foreign Service.

We can mine America’s long diplomatic history for inspiration. Drawing on my own experience, I recall, as a young intern at the U.S. embassy in Mauritania, seeing first-hand the respect and influence President Jimmy Carter earned as the first U.S. leader to make Africa a priority. A decade later, when I served at the National Security Council with responsibility for the Soviet Union, I witnessed President George H.W. Bush negotiate the peaceful end of the Cold War and Bill Clinton consolidate the triumph of democracy over communism. President George W. Bush launched the bipartisan PEPFAR initiative to help in the fight against HIV/AIDS, polio, malaria, and other deadly diseases in Africa, the Caribbean, and elsewhere (a useful precedent when thinking about what it will really take to combat the coronavirus, not only in the developed nations, but in those with far fewer economic and healthcare resources).

It was on 9/11, however, as U.S. ambassador to the North Atlantic Treaty Organization, that I learned one of the most powerful lessons about diplomacy. Just a few hours after Al Qaeda terrorists attacked the World Trade Center and Pentagon, my phone started to ring at NATO headquarters outside Brussels. My Canadian colleague, David Wright, called first—followed by the ambassadors of the United Kingdom, France, Poland, Germany, Italy, and many others. Each asked, “What can we do to help?” Those were very welcome words on the single darkest day in recent American history.

By the next morning, invoking Article 5 of the 1949 NATO Treaty for the first time in history, all of the NATO-allied countries came to the rescue of the United States—lending mighty political and diplomatic support to the military response that would come later. Our allies considered Osama Bin Laden’s attacks on New York and Washington as an attack on them as well. Their militaries all went into Afghanistan with us (the majority remain 19 years later—and they and other partner nations have suffered more than 1,000 combat deaths; we owe them a lot).

Contrary to such evidence, the current president believes the United States is strongest when it acts alone—unburdened of allies and partners whom he views as relics of our Cold War past.

I lived the history of 9/11 and draw a very different lesson about the value of allies to the United States. Why would we want to live alone in a troubled and dangerous world, without the benefit of friends and allies by our side?

Our NATO allies, as well as Japan, South Korea, and Australia, act as multipliers of American power in the world. They provide a lifeline of military, economic, and political support when we often need it most. They represent the great power differential between the United States and our rivals Russia and China, who can count on no such allies when the chips are down.

As we recover from two decades of war and COVID-19’s assault on our society and economy, we will need to look at our global role in a new way. The era when America could run the world by fiat has vanished. We are still the strongest economic, military, and technological power—but China, India, and others are gaining on us. We can no longer overpower our adversaries in every crisis. And although we will need to call on the military to defend us in the future, we will more often than not need to outwit and outmaneuver adversaries through the strength of our diplomats and our alliances—not to mention mustering support for those broader, nonmilitary crises we now face, from pandemics to climate change.

Uniting Diplomacy with American Values

My experience in government has also taught me that diplomacy is most effective when it is cemented in American values and the rule of law. That should lead us to stand up for democracy when it is threatened in NATO-allied countries such as Turkey and Hungary, and when human rights are assaulted in Russia and China.

When I interviewed former Secretary of Defense Jim Mattis a few months ago in Washington, he pointed to this foundational American strength. The United States exercises two great powers in the world, he said. The first is the “power of intimidation,” through our first-class military. But America has a second and more important power—the “power of inspiration” to the rest of the world, reflecting our nation’s democratic founding.

A Harvard audience heard a variation of this theme from Winston Churchill in Memorial Hall on September 6, 1943, when he received an honorary doctorate of laws from President James B. Conant. In a lyrical speech entitled, “The Gift of a Common Tongue,” Churchill urged his audience of deans, professors, and dignitaries—and in later remarks in nearby Tercentenary Theatre, more than 6,000 cadets training to go to war—to reject isolationism and accept the mantle of world leadership. At a time when the United States had surpassed the British empire as the most powerful global leader, Churchill’s speech was a metaphorical handing of a baton to the young Americans on the front lines of World War II.

“The price of greatness is responsibility,” he said. “One cannot rise to be in many ways the leading community in the civilized world without being involved in its problems, without being convulsed by its agonies and inspired by its causes.”

Churchill’s words at Harvard then are as vital and relevant to Americans today. Americans can author a better, more just, and peaceful era if we recall our responsibility to lead and to be a force, through diplomacy, for democratic values in an ever more complex and dangerous world.

Nicholas Burns, Goodman Family professor of the practice of diplomacy and international relations, is chair of the Harvard Kennedy School’s Program on Transatlantic Relations, director of the Future of Diplomacy Project, and a co-leader of the American Secretaries of State Project. Williston professor of law Robert Mnookin, Donaldson professor of business administration James K. Sebenius, and Burns have interviewed all the living American secretaries of state, from Henry Kissinger to Rex Tillerson, for the latter, Harvard-based, project, and derived lessons now used in Harvard classrooms. The interviews will form the basis of a book on American diplomacy.
In the summer of 1977, NASA rocketed two spacecraft out of Earth’s orbit. Their mission: explore the unexplored. NASA had already been to the moon; with Voyager 1 and Voyager 2, its Jet Propulsion Laboratory wanted to push beyond the outer planets and the Sun’s gravitational pull, and into interstellar space. By 2030, drained of electricity, both ships will lose contact with Earth. But that may not be the last time they’re heard. Affixed to each Voyager is a golden record, The Golden Record. Some know the Golden Record as a collection, basically, of Earth’s greatest hits. It contains selections from Bach’s Brandenburg Concerto No. 2 in F Major and his third Partita for solo violin. It has the Queen of the Night’s aria from Mozart’s The Magic Flute, the first...
In his forthcoming book, *Music from Earth: Alien Listening and NASA's Golden Record*, Rehding imagines how to analyze music that’s been launched into space and ripped from any semblance of context. Written with co-author Daniel Chua, professor and chair of music at the University of Hong Kong, *Music from Earth* centers on their proposed “Intergalactic Music Theory of Everything.” The theory provides a new definition of music—one they hope makes as much sense for aliens as it does for humans—and it comes down to frequencies, repetitions, and time. “We need to reduce the idea of music to its most basic components, to bare vibrations,” Rehding wrote in a 2017 edition of *Musical Brainfood*, an International Musicological Society publication, “and to build it up from there.”

All sounds are made of vibrations—from the tempestuous sonority of Vivaldi’s “Spring” to the joyful hum of a Stevie Wonder harmonica solo. A string or a reed vibrates, waves of pressure travel through out the air, and particles knock into each other. That’s how sound is created.

Repetition, to Rehding, makes sense of these frequencies. “Imagine a series of clicks that we record,” he says. “When we play them slowly, we hear them as a pulsation of individual clicks, a rhythm. But if we speed up the recording so that the rate is higher than about 20 clicks per second, something interesting happens: the individual pulsations merge into a single tone.” This change occurs at 20 Hertz [Hz]—the human “auditory threshold”—where repeated clicks become pitch. “Our hearing only has this one auditory threshold,” Rehding explains. “But we could extend this principle further: to phrases, to formal sections of a piece. We could think of them as very, very slow rhythms, rhythms-at-large, another kind of frequency....That’s the nuts and bolts of the theory. That’s how temporality is shaped.”

By reducing music to its most basic components, Rehding hopes to create a portal into music analysis that anyone can enter. That includes aliens. If and when they listen to the Golden Record, they’ll have only the recordings themselves. Alongside Beethoven’s Fifth, they won’t have access to elucidatory music analysis from Henrich Schenker. As they listen to The Rite of Spring they won’t be privy to Allen Forte’s set-pitch-class theory. To supply a theoretical framework for each recording on the Golden Record, NASA would have had to attach a Golden Textbook. It’s a level of context that would overwhelm most aliens (and most humans).
“Music Theory Is for Music Theorists”

Music theory is complex. Becoming versed in “sonata theory” and the musical backbone behind Mozart, Haydn, and Beethoven can take years of training in tuning and tonal systems, harmony, rhythm, notation, and the gamut of performance practices. By the time twentieth-century composer Arnold Schoenberg’s music gets involved, a new framework is needed. Most people, no matter their love for music, struggle to comprehend the technical explanations behind it, much less contribute to its study. “[M]usic theory is for music theorists,” Rehding and Chua write. “It has fallen into an academic narcissism that would be quite beautiful were it not so boring for everyone else peering into the discipline.”

But music theory wasn’t always thought of in this way. Pythagorans believed that planets and heavenly bodies rang at different frequencies based on their distances from each other, and grouped the study of music with that of arithmetic, geometry, and astronomy. According to myth, he even created his own mode of music theory. Drawn to the clanging of hammers from a blacksmith’s forge, he noticed a smattering of consonances and dissonances. He measured the hammers and noticed that the ratios of weight between them determined the music he heard. The ratio of two to one produced a sonorous octave, while the ratio nine to eight produced a clanging dissonance. “And so for these hammers,” Rehding writes, “Pythagoras distilled a speculative music theory of everything: the nonhuman world is composed of numbers according to harmonic proportions. The entire universe suddenly became music technology.”

No humans made music in this myth. The blacksmith was not consciously producing a pleasing chord progression. Instead, the hammer was the agent of music theory, and the blacksmith an instrument, unknowingly taking part in a world of vibrations.

Rehding and Chua don’t entirely buy into Pythagoras’s music theory, but they resonate with its premise: the world, even without human ears, is filled with music. “The environment itself is all ears; it is abundant with life, tingling with receptors, and vibrant with oscillators,” they write. “Humans may form part of this network, but music’s identity is not isolated by humans.”

When Rehding reduces music to frequencies, it’s not really a reduction. “I’m teaching a seminar on Beethoven...,” he says. “I don’t think of it as either/or. I think of it more as a both/and.”

But if music is defined as repeating vibrations, that means an event hundreds or thousands of years in the future is contingent on something happening now. As he notes, with a smile, “Thinking beyond the next legislative cycle would be really helpful for all of us.”

Similarly, a music theory based on frequencies encourages a new perspective on human perception. Between the frequencies of 20 Hz and 20,000 Hz, people hear notes. The oboe’s “A” that tunes an orchestra resonates at around 440 Hz; the piano’s lowest note sounds at about 25 Hz. Thirty thousand or so hair cells in the human ear, each trained to pick up certain frequencies, help reduce related frequencies into a fundamental pitch. When someone presses the piano’s middle C, most hear just that note, even though a series of higher frequencies vibrate simultaneously.

But if music is defined as repeating vibrations, that means an entire musical palette exists outside human perception. The study of music then pushes into biology. It is almost assured that aliens, with distinct biological features and a unique atmosphere, will not hear The Golden Record the way humans do. Even on Earth, close evolutionary relatives like rhesus macaques don’t share the human ability to fuse frequencies into single notes. To their ears, each note of a simple piano melody might sound like a polyphonic hodgepodge. Octopodes, which perceive sounds between roughly 400 and 1000 Hz, can’t hear the entire upper range of a piano keyboard; funky bass lines below 400 Hz might be nothing more than a rhythmic pulsation. For humans to make make sense of whale song, the “singing” must be filtered through a hydrophone that transduces sound waves into electrical voltage. The “humanized” version would seem alien to whales.
And different species have different perceptions of time. In one thought experiment, Karl Ernst von Baer, a Baltic German explorer and scientist, theorized that for a fruit fly with a lifetime one-thousandth the average human’s, each second would be a major event. Music humans hear as fast and high-pitched could be incredibly low and slow for this fruit fly; on the Golden Record, Edda Moser’s stratospheric soprano range on the Queen of the Night aria might come across as a basso profundo. The three-minute run-time for the fruit fly would be the human equivalent of 48 hours.

Rehding knows how unlikely it is that an alien, light years away, will grab the Golden Record, pop it into a record player, and appreciate the album’s novel curation. “I don’t want to suggest that I’m out there looking for, you know, little green men,” he explains. “I think I’ve mentioned this every time I start talking to a stranger about this project.” But by shaking up prevailing assumptions about music and trying to understand how a 13-eared, 20-foot-tall being might perceive Bach, he sees a path toward a better understanding of how music works here on Earth. “[E]ven as we turn our attention to distant planets,” he says, “the benefits we may reap from this post-human musicology are ultimately geocentric and distinctly human.”

Down the Musical Rabbit Hole

Rehding was born in Hamburg into what he describes as a “wholly un musical” family. He remembers his parents signing him up for a variety of activities, but the only two that stand out were handball (traumatic) and piano lessons (fun). He sometimes spent hours at the keyboard—not practicing in any focused way, just playing through pieces. When his school orchestra needed a trombone player, he volunteered to learn that instrument, too.

Still, as the son of a dentist and a psychotherapist, he thought he, too, would work somewhere in medicine. But after a 20-month, post-high-school stint as a conscientious objector, working in a home-care center, he decided that the field wasn’t for him.

Unlike many of his peers, Rehding had never taken a year abroad during high school, so he thought college would be a good time to do so. His original intention was to study Russian, his favorite high-school subject, but he wanted to study in England. “And so I decided, well, you know, music isn’t so bad,” he says, laughing.

His plan seemed unlikely to succeed. Despite learning to play instruments and studying music as a high-school elective, he hadn’t done much to distinguish himself in the musical realm. Looking for advising at the British Council Office in Hamburg, he informed a counselor of his intention to apply to Cambridge. “She looked at me up and down and said, ‘You?’” he recalls. “And that was her advising. That was it.” Rehding applied anyway and found himself in a daunting process with semi-hostile interviewers. “They’re kind of mean,” he says. “They kind of push you until you wave the red flag.” For a small committee, he performed a piano selection, briefly studied and discussed a Mozart quartet, and transcribed four-part harmonies by ear. “In retrospect, I was incredibly unprepared,” he says. The interview went on for what felt like forever, though he estimates it was closer to an hour. He was convinced that that would be it.

It was not; he received an acceptance in the mail, and in 1991 enrolled in Queens College. The undergraduate curriculum, he says, was “incredibly traditional and rigorous and narrow...You only study music. You don’t do anything else.” He dutifully completed counterpoint exercises and studied keyboard harmony and ear training and focused primarily on the nineteenth-century orchestral repertoire—a safely traditional field. But he couldn’t help venturing outside. For his undergraduate thesis, he wrote about György Ligeti’s 1982 Trio for Violin, Horn, and Piano and how the innovative composer had leapfrogged the then-stylish avant-garde.

He returned to Germany intending to continue his studies there, but met with resistance. “I waved my certificate at German authorities and they just smiled sweetly and said, ‘We don’t recognize foreign degrees,’” he recalls. He decided to return to Cambridge to complete a Ph.D.

It was then the floodgates opened. With a foundation in tonal and harmonic theory established, Rehding explored areas he had never thought of, including the relationship between music and literary history and theory. He read Foucault, Derrida, and Adorno, and, for his master’s thesis, researched the work of Ernst Krenek and Paul Hindemith, composers who combined baroque counterpoint and twentieth-century atonal techniques. He wrote his doctoral thesis on Hugo Riemann, a then-obscure German music theorist.

John Deathridge, who advised that dissertation, remembers his student as unafraid of straying from the traditional Cambridge path. Rehding, he says, can find clarity and consequence in the obscure, drawing interest from outside the field. “I’m actually a nuts-and-bolts music person myself, because I’m a conductor and I can teach harmony and counterpoint,” Deathridge says. “But obviously, if you want music to have any kind of intellectual or cultural meaning, you have to get beyond that. Not everybody listening to rock music will know about V7 chords.” Rehding’s music research is for the initiates and uninitiates alike.
After 10 years at Cambridge, with undergraduate, master’s, doctoral, and postdoctoral programs under his belt, Rehding was ready to move on. “It’s incredibly beautiful,” he says, “and incredibly small and boring.” He applied to and was accepted for postdoctoral work at the University of Pennsylvania, and then at Princeton—neither of which required him to be in a formal music department. Penn was a culture shock, but a good one. He was particularly fascinated by Philadelphia’s grid system (uncommon in Europe) and American gun culture, and glad that academics discussed their work over meals; at Cambridge, there was an unspoken tradition that work is not to be discussed. “And so since that’s basically all you do, there isn’t much to talk about other than the weather or the quality of food in the dining hall,” Rehding says.

At Princeton, he grew fascinated with media theory and became particularly invested in the work of German literary scholar and media theorist Friedrich Kittler, who studied how different technologies store, transform, and transfer data. “Sound itself has always been an obscure object of desire and fascination,” says John Durham Peters, professor of English and film and media studies at Yale (who has connected with Rehding over a common interest in Kittler). “It seems to embody the central problem that media scholars are always after, which is time and attention and how things come into being.” A record floating in interstellar space, for instance, is not just an object, but packaged information from a different time and place.

In 2003, Rehding accepted a junior-faculty position at Harvard, expecting to be sent on his way when the question of tenure arose. He was granted tenure just two years later—the first successful internal case in the music department in more than 40 years. His success comes down partly to his propensity for rabbit holes. “I get sort of obsessed with ideas and I start reading around. And there is a process of discovery that is somewhat random,” he explains. “One thing leads to another, and at some point I end up stuck on something. Maybe that’s whale song, maybe that’s something else.” An interest in the intellectual development of music theory began with his thesis on Riemann. By 2009, Rehding was on sabbatical, studying intensive Ancient Greek (his seventh language) at Wellesley, trying to understand better how Grecian music theory of that era differed from its modern version. His obsession with media theory led to an investigation of the physical mechanism of the modern siren, and how short blasts of air at different frequencies could produce different patterns of pitch and rhythm.

But these aren’t private rabbit holes to investigate alone. He’s worked with physicists on sirens and with biologists on whale songs. In one paper, he provides a neuroscientific explanation of experiences of beauty, aided by his neuroscientist husband, Bevil Conway. “That’s why I call him a bit of a switchboard,” says Chua, who was Rehding’s classmate at Cambridge. “He channels a lot of ideas and connects a lot of people...He’s come to understand that you can’t just have a very self-enclosed system of music that is just for the initiates.”

When Rehding helped redesign the undergraduate music concentration for fall semester of 2017, as co-chair of the curricular review committee, it was this openness that he was trying to achieve, he says. The department eliminated the general theory requirement, instead requiring two tutorials—Music 97a: “Thinking about Music,” and Music 97b: “Critical Listening”—and a tutorial in which to write a thesis or work on a performance or composition project. The decision was controversial, sparking strong reactions, and harshly worded blog posts, from those across the music-theory world who thought the new program tossed aside academic rigor.

Rehding, though, doesn’t think the changes decreased rigor; he thinks they increased options: inviting people to contribute to the study of music who might not otherwise consider it. Students who aim to be classical composers would still be guided toward intensive theory courses, but others could find a distinct path. “I don’t think we’re taking anything away from anyone if we broaden out,” he says.

Rehding “channels a lot of ideas and connects a lot of people.... He’s come to understand that you can’t just have a very self-enclosed system of music that is just for the initiates.”

A Future in Frequencies

In late March, Rehding was sitting at home, forced away from Harvard by the coronavirus, trying to answer the unexpectedly difficult question of what he’s been listening to lately.

“I have some Taiwanese traditional music from the 1940s,” he says, chuckling under his breath. “I have some socialist children’s songs from the 1970s—from my childhood.” Also lying around: electronic remixes of music on the Golden Record, pieces by contemporary German composer Helmut Lachenmann, Schmelzer violin sonatas from the seventeenth century, jazz from colleague Vijay Iyer, Rosenblatt professor of the arts. “I have listened to each of these in recent weeks,” he says. “Sometimes purposeful, sometimes less. It’s not very systematic.”

Such is his approach to almost everything—an approach especially distinct in the rarified world of music theory. Seeking out physicists, philosophers, media theorists, and NASA project managers in his quest to make sense of the Golden Record, he seeks only to add, never to take away. To Rehding, imagining an interstellar frequency-making machine filled with loops, cycles, folds, and oscillations landing in the tentacles of an alien life-form is a generative exercise. He believes that music can help people think about their collective future—a future measured in frequencies.

He isn’t suggesting a departure from tonal harmony or a dismissal of Beethoven. And he doesn’t think humans should listen to human music as aliens would have to, hopelessly without context. But Rehding has always found clarity in the obscure. By pushing to the edge of a highly specialized discipline, and into interstellar space, he imagines a more universal theory—one that resonates with aliens and humans alike.

“It always comes down to that fundamental question,” Rehding says. “There is this strange thing, music, that fascinates us. Why is there music? What’s it for? Why do we love it so much? I think that’s the ultimate question that we still don’t have a very good answer to.”

Staff writer and editor Jacob Sweet plays the clarinet. He profiled nutrition scholar Frank Hu in “Healthy Plate, Healthy Planet” (May-June).
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WE’RE ALL IN THIS TOGETHER.
“Theater Is Church”

Playwright Katori Hall on the joy—and trauma—of black life

by STUART MILLER

In one scene of Katori Hall’s The Hot Wing King, the characters sing all of “Never Too Much” by Luther Vandross—and each night at New York’s Signature Theatre, large segments of the audience joined in. “Luther Vandross is a musical icon for black people and they know all the words, so I gave black audience members a gift, something they could sing along to,” says Hall, A.R.T. ’05, who also wrote the book for Tina: The Tina Turner Musical, which played on Broadway earlier this year. “For the white people, it’s a learning experience and they can enjoy this beautiful moment.” The song represents more than that, (From top): The cast of The Hot Wing King; playwright Katori Hall; Toussaint Jeanlouis (left) and Nicco Annan as Cordell and Big Charles in The Hot Wing King

Reprinted from Harvard Magazine. For more information, contact Harvard Magazine, Inc. at 617-495-5746
though. Singing together is a ritual central to black identity, says Hall—from the cotton fields to church to rap concerts. "If I am telling the story about how black people have been resilient in this country, I have to use the healing power of music because that is how we’ve been able to honor the mother tongue that was snatched away from us," she says. "With music we are able to retain some of how we communicate with each other."

In The Hot Wing King, Cordell Crutchfield is living in Memphis with his boyfriend, Dwayne, having left behind a wife and two sons to start a new life; the couple are prepping Cordell’s masterful recipes for the city’s annual hot-wing festival with friends when Dwayne’s nephew arrives, portending trouble.

In one sense this is very much in line with her earlier work. Hoodoo Love, Hurt Village, and The Mountaintop (which recounts the last night of Martin Luther King Jr.’s life) are also set in her hometown of Memphis, while Tina Turner, who played on Beale Street in the 1960s, grew up only an hour away. “I’m very much committed to putting the city of Memphis on the map,” Hall says. “It’s known for a lot of things not to be proud of, like the murder rate or the percentage of people who are obese—you can go online for the stats,” but she sees a city of resilient strivers: “People who pull themselves up by their bootstraps even when they don’t even have a bootstrap.”

But The Hot Wing King is lighter and looser than her earlier Memphis plays—which are haunted, often angry—not to mention two others set in Rwanda. “With this play, I wanted to embrace the articulation of black life and not necessarily black trauma, so the piece is infused with joy and love and jokes,” she says. “I did not set out to make a comedy, but I saved space for people to laugh—black audiences laugh out of recognition, so there’s a lot of moments that feel like, ‘Oh that’s my brother, or ‘My momma used to say that.’”

Hall herself bursts with positive energy. Even home-bound in New York during the coronavirus closure, trying to write and care for her two children, ages 6 and 3, she frequently lets loose with a “Yaaay!!!!” or laughter that leaps through the phone, cutting through the social distancing. “She’s one of the most generous people I’ve ever encountered,” says Hot Wing King director Steve H. Broadnax III. (They became friends in 2016 when he directed The Mountaintop.) “She’s very collaborative and open to ideas. She’s a joy to be around.”

Hall has never lost sight of her original mission—to populate the theater with stories about and roles for African-American women—even while expanding it. “Storytelling creates a feeling of empathy, which to me can be the beginning of social change,” she says. She is keenly aware of what it means to be marginalized in America: her grandmother shared stories of life as a sharecropper, and even though Hall’s childhood in her school’s gifted program was different, she was often the only black student in classes. When she became high-school valedictorian, the school changed its tradition of having the valedictorian lead the graduation procession and instead had students line up alphabetically.

As an undergraduate in Columbia’s acting

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**OPEN BOOK**

**What’s Become of “Character”?**

subject for her interests, spanning the meanings of the term from the ancient word for engraving or stamping, to the multiple manifestations of moral principles, upheld or violated. There is plenty of grist: for the intellect in general, and for discussions of the hurly-burly of contemporary leadership—or the lack thereof. From “The Character Effect,” her afterword:

A strange thing has happened to the idea of character on its way to the twenty-first century.

What once was an object of conviction, the belief in human character, has become more like a label, or an evaluation, or a good (or bad) grade. It’s almost as if this qualitative term is better left unspoken—except in headlines, Senate hearings, job references, and obituaries.

Scientists tend not to use it. Nor do social scientists—psychologists, sociologists, anthropologists. Philosophers prefer “ethical” or “moral.” Biographers may write warmly of the “character” of figures from the past, like Abraham Lincoln, Frederick Douglass, or Eleanor Roosevelt. But when “character” appears in the biographies of present-day figures, especially those of politicians and celebrities, the assessment is usually not so positive. Character flaws and character failings sell books. But in the process of this evolution, something of the term’s complexity and history has been neglected, or forgotten.

Is bad presidential behavior bad character, or just locker-room talk? Is a gross violation of decency, or a glaring instance of financial impropriety, “not in character” for a person whom we would like to praise, or hire, or vote for? “Out of character” implies a sense of what would be “in character” for the individual in question. But how do we know what is “in” his or her character?

In recent years, there seems to have developed something of a gulf between the ideal of character and its practice. “Preachers say, ‘Do as I say, not as I do,’” noted the seventeenth-century English jurist and scholar John Selden, adding dryly that he would not take such advice from a doctor.
courses, Hall couldn’t find many scenes for young black women. She decided to write them herself, but says she felt snubbed in her first playwriting course, when the professor and students who were white reacted coldly to her Southern, black rhythms and language.

It was while earning a master’s degree at Harvard’s American Repertory Theater (A.R.T.), that she discovered African-American voices in the theater—and her own. Plunging into the plays of Suzan-Lori Parks and Lynn Nottage inspired and shaped her, and the A.R.T. also offered other “truly life-changing exposure,” like a trip to Russia to learn the Stanislavski acting method and see how serious acting can be respected. “It’s not about ‘likes’ or your following, it’s about using your skin and lived experience to become another person,” she says. “I'm a better writer because of it. I understand what actors need to be able to create and feel fulfilled.”

She finished writing *Hoodoo Love* at the A.R.T. That launched her career after it was selected by the Cherry Lane Theatre Mentor Project. Nottage, a two-time Pulitzer winner whose 2016 play *Sweat* explored the unraveling of a Pennsylvania factory town, was her mentor. Hall “was ambitious in the most wonderful way,” Nottage recalls. “She had a plan, a level of focus and drive, which led her to where she is now. *The Hot Wing King* shows a marvelous evolution in her craft as she negotiates new tones and genres and tells expansive stories of women and now men of color.”

Indeed, while Hall started out focused on black womanhood, she now aims to portray all black life: “Even the marginalized folks within a marginalized community,” she says, referring to *Hot Wing’s* gay men or the strip-ers in her 2015 play *Pussy Valley*. “I want to poke into the cracks and crevices that even the larger black community wouldn’t necessarily feel comfortable with. I am digging into all of these characters I have wanted to honor all of my life.”

She’s also taking these characters to a broader audience, turning *Pussy Valley* into the Starz series *P-Valley*. A sprawling and intricate deconstruction of race, class, gender, the politics of beauty, and the business of desire, it needed the breathing room television allowed. Hall was surprised and “honored” to be given the reins, knowing how
Montage

few black women are showrunners, especially considering her lack of television experience. “It’s extremely scary,” she says—but she’s hoping for more.

Though The Hot Wing King closed early due to the pandemic, Hall is now in discussions to turn that into a series as well. “Yeeeeeeres,” she exclaims, excited to expand the characters’ lives but also to put Memphis on the screen in a positive light.

Yet Hall cannot imagine leaving theater behind. It’s the place where she can create the worlds and tell the stories she wants, the ones she believes can change America. “I do think theater is church. It is a space where we gather in—the people on stage are our pastors for that moment and they’re up on a pulpit and they are preaching a kind of story,” she says. “I am spiritual. But while I don’t go to church every Sunday, I do go to theater every Saturday.”

The Power of Unreason

Composer Paul Moravec’s soulful music
by Lydialyle Gibson

Deep in the second half of Sanctuary Road, an oratorio by composer Paul Moravec ’80 based on stories from the Underground Railroad, the heart of the whole piece seems to crack wide open. In an aria titled “Rain,” an enslaved woman summons a downpour (“Come down Noah’s Ark heavy”) to scatter her pursuers as she flees north to freedom. The melody begins with a poignant minor chord, and then, as the lyrics build and begin to soar, and the singer imagines herself free and dancing in the rain, the music brightens into a major key. “It’s like, the sun comes out,” says Moravec. “There’s this emotional opening-up—this is the spiritual anchor of the entire piece.” The rest of the ensemble joins the soprano soloist, and the aria resolves into what Moravec calls a “freedom” motif threaded throughout the oratorio. When it washes over the waning seconds of this song, listeners have heard variations of it a few times already at pivotal moments, and its repetition here is suddenly, powerfully moving.

That’s the idea, says Moravec, who teaches at Adelphi University on Long Island and won a Pulitzer Prize in 2004. Music, he explains, “is both an extremely rational, analytical art, and also a fundamentally irrational one. And at the end of the day, its power lies not in its reason, but in its unreason, its emotion.” That’s why the “freedom” motif works even if listeners don’t consciously register that they’ve heard it before. “Music plays directly on our central nervous system,” he says. “It’s primordial.” He pauses for a moment. “You know, Darwin had the idea that song preceded speech in human development, that our distant ancestors sang to each other before they could speak words.”

Song began speaking to Moravec at a very young age. He was six, growing up in Buffalo, when the Beatles appeared on The Ed Sullivan Show in 1964. Their irresistible cool, and his older sisters’ excitement, bowled him over. “I got a tennis racket and pretended to play it left-handed,” like Paul McCartney. His formal music training began in first grade, when he learned to play the recorder, and, later, the piano, but most important was singing in an Episcopal cathedral choir. “From eight, nine, 10 years old, I was a little professional musician, sight-reading pieces, performing on Sunday,” he says. “It was wonderfully rigorous and nourishing.” Soon, he began writing songs for guitar, and then piano, and by high school, he’d decided he wanted to be a composer. “It was like, ‘Now I just have to figure out how to do it.’”

At Harvard, he concentrated in music, sang with the Harvard-Radcliffe Collegium Musicum, and worked as a teaching assistant to legendary music professor Elliot Forbes (“It was fun. I was basically his piano accompanist”). He won a Prix de Rome arts scholarship and spent the year after graduation at the American Academy...
in Rome (“I just composed music all the time and walked around the city. Rome was a whole other education in itself”). After that came a doctorate in music from Columbia.

Moravec’s body of work, spanning nearly 40 years, is prodigious and difficult to summarize. “Polystylistic,” is how he puts it. He’s written oratorios and operas—most recently, 2013’s The Shining, based on the Stephen King novel—but most of his work is instrumental and abstract. Sometimes it is inspired by place: Albany, Rome, Berlin’s Brandenburg Gate, the Montserrat monastery in the mountains of Catalonia, the aurora borealis in northern New Hampshire. He has set to music the letters of soldiers and their loved ones from the Civil War to Vietnam. In May, as a response to the pandemic, the nonprofit OPERA America brought together more than 100 singers by video for a virtual performance of Moravec’s 2016 composition “Light Shall Lift Us.”

He won the Pulitzer for Tempest Fantasy, a five-part chamber work for violin, cello, piano, and clarinet that unfolds as a meditation on Shakespeare’s play The Tempest. A demanding and complex work—sometimes sprightly, sometimes contemplative, closing with an ecstatic rush of sound—it largely tracks the emotional trajectory of Prospero, the melancholy sorcerer-prince who finds happiness and hope in the play’s final act. Three years later, Moravec revealed that Prospero’s trajectory mirrored his own: suffering from severe clinical depression in the 1990s, he had undergone electroshock therapy. It changed his life—and maybe saved it. That experience remains central to his work, “the sand in my oyster, so to speak,” he says. “As a composer, I try to make beautiful things. Everything else radiates from that. And joyous things too, because in my experience, the alternative is too awful. It’s too appalling.”

He began work on Sanctuary Road in 2016. It is the second in a three-part series of large-scale American historical oratorios. The first, 2008’s Blizzard Voices, told the story of the “Children’s Blizzard” that devastated the Great Plains in 1888. The libretto borrowed from the poems of Ted Kooser, which had incorporated actual words from survivors. For Sanctuary Road, Moravec worked with librettist Mark Campbell (his collaborator on The Shining, “Light Shall Lift Us,” and other works), who adapted the writings of William Still, an African-American businessman,
Off the Shelf

Recent books with Harvard connections

The Inside Game, by Keith Law ’94 (Morrow, $28.99). Absent baseball games, fans fall back on books. In his latest, a senior baseball writer for The Athletic suggests he is pursuing larger prey (the subtitle talks about “what baseball behavior teaches us about ourselves”), complete with references to Thinking Fast and Slow-style analyses of anchoring bias (the case for robot umpires), groupthink, etc. No matter: it’s still baseball—painfully so for Red Sox fans, as in “Grady Little’s Long Eighth Inning Walk,” on “why doing nothing is the easiest bad call.” Ouch.

The Decline and Rise of Democracy: A Global History from Antiquity to Today, by David Stasavage, Ph.D. ’95 (Princeton, $35). The author, who professes politics (and is dean for the social sciences) at New York University, advances a sweeping and original thesis about how the distribution of power among rulers and the ruled has been arranged, and the particular circumstances and unexpected situations in which democracy arose. Given current conditions, one may hope that the trajectory implied in the title holds true.

Mosaics of Knowledge, by Andrew M. Riggsby ’87 (Oxford, $74). With the world drowning in online information, it proves illuminating to dive into the past. Riggsby, professor in classics and of art history at the University of Texas, Austin, conducts a very scholarly guided tour of how the Romans represented information (via concepts such as lists, tables, weights and measures, landscapes, and more)—often for very limited, rather than universal, uses. The best kind of academic work, rendering the commonplace unfamiliar. The landscape examples dazzle.

How to Think Like Shakespeare: Lessons from a Renaissance Education, by Scott Newstok, Ph.D. ’02 (Princeton, $19.95). The author, founding director of the Pearce Shakespeare Endowment at Rhodes College, aims to encourage thinking about thinking, rather than education for instrumental purposes. To that end, he enlist[s] everyone from The Bard to Yogi Berra (“If you can’t imitate him, don’t copy him”), in brisk, unexpected, and amusing ways.

From Darwin to Derrida, by David Haig, Putnam professor of organismic and evolutionary biology (MIT, $39.95). A broad, deep explanation of “how directionless chance” (Darwinian evolution) “could generate something as complex as a living thing. But chance does not act alone,” in that natural selection “preserves the progeny of fortunate accidents and the progeny of those progeny with additional fortunate accidents, while it eliminates progeny with unfortunate accidents and those without recent serendipities.” This, the difference “between a false note and nailing it,” drives evolution because “the serendipitous error is retrospectively endowed with meaning once it is copied and recopied.” A lyrical scientific voyage to “the meanings of life” emerging from the workings of nature.

Eva & Otto: Resistance, Refugees, and Love in the Time of Hitler, by Tom, J.D. ’73, Kathy, and Peter Pfister (Purdue, $29.99, paper). A family memoir documenting the Jewish Eva and Catholic Otto, who opposed Hitler from within Germany before 1993, then in exile in France until 1940, and ultimately in the United States—including on assignments for the Office of Strategic Services. Drawn from diaries, correspondence, and other documentation, their children’s account is vivid, and the retelling for present readers about the risks and costs of opposing fascism remains relevant.

The Blood of San Gennaro, by Scott Harney ’77 (Arrowsmith Press, $20). This posthumous poetry collection, gathered by Harney’s partner, Megan Marshall ’77, RI ’07 (herself a Pulitzer Prize-winning biographer), includes the stark 1981 essay, “Getting Along in Charlestown,” about Boston’s racial divisions. Although Harney ranged widely, local readers will understandably gravitate to what he did poetically with raw material drawn from Somerville and Revere Beach.

Twilight of the Gods, by Ian W. Toll, M.P.P. ’95 (Norton, $40). The concluding volume of a vast Pacific War trilogy, this huge installment encompasses the war in the western Pacific theater during 1944 and 1945. Toll’s narrative prowess is a fine match for the tale he tells. The scope of the battles and blood was epic (“During the first 21 days of the fight on Iwo Jima, the medical corps handled an average of 1,000 casualties per day”), and, if anything, the fighting can now be seen as the starting point of U.S.-Pacific transformations that have altered the world unimaginably ever since.

Men on Horseback: The Power of Charisma in the Age of Revolution, by David A. Bell ’83 (Farrar, Straus & Giroux, $30). Beginning with Cassius’s simultaneous praising and denigration of Julius Caesar, the Princeton historian examines those who have charisma (“a gift of divine grace”) and their effects on the polity. He traces political charisma to the age of democratic revolutions, in the mid 1700s. A brisk and thought-provoking way of thinking about Napoleon, Washington, Bolívar, and others—and ourselves. Beautifully written.

The Inevitability of Tragedy: Henry Kissinger and His World, by Barry Gewen (Norton, $30). As U.S. international relations and engagements are being rethought, or torn apart (or both), this analysis probes the intellectual origins of the worldview and strategies propounded by alumnus/professor/national security adviser/secretary of state/consultant/eminence grise Kissinger ’50, Ph.D. ’54, L ’55. One may embrace or abhor his realism, driven by a pessimistic outlook on nations’ competition for power. But it is worthwhile to engage with some worldview at a time when much of what is happening on the global stage appears unmoored to anything other than chest-thumping. Realism may be enjoying a moment: Henry Kissinger and American Power: A Political Biography, by Vanderbilt historian Thomas A. Schwartz, Ph.D. ’85, is forthcoming from Hill and Wang.

Exit from Hegemony: The Unraveling of the American Global Order, by Alexander Cooley and Daniel Nexon ’95 (Oxford, $29.95). Scholars from Columbia and Georgetown, respectively, put the changing world order in theoretical context. An image of Donald Trump appears on the cover, but the import is that no matter who is in the White House, it’s a different planet out there. Whether realist (see above) or some other flavor of leader, the authors can envision a new Cold War, various kinds of multipolarity, “globalized oligarchy and kleptocracy,” or some combination thereof. What they don’t see is “maintaining a mystical American exceptionalism.”

Rumpelstiltskin’s Secret: What Women Didn’t Tell the Grimms, by Harry Rand, Ph.D. ’74 (Routledge, $36.96 paper). A scholarly reading and interpretation of the truly odd—in some senses, repellent—folk-tale, as seen by a Smithsonian senior curator of cultural history, Hardly Disney material, the tale gets at men’s sexual inadequacy, workplace harassment, and more: “an unlovely story about unpleasant people,” which nonetheless is widely told to children. These levels of weirdness are explored from multiple perspectives, in astonishing depth.

The Deviant’s War: The Homosexual vs. the United States of America, by Eric Cervini ’14 (Farrar, Straus and Giroux, $35). An in-depth history of the battle over gay rights, told through the story of astronomer Frank Kameny, Ph.D. ’56, and his foundational fight against federal government sanctions against homosexuals. The author is a director of the Harvard Gender and Sexuality Caucus.

Towns, Ecology, and the Land, by Richard T.T. Forman, professor of landscape ecology emeritus (Cambridge University Press, $51.99 paper). Between cities and undeveloped natural areas lie the towns and villages in which half the world’s people occupy half the world’s land. A preeminent ecological landscaper has given these places their due, in an exhaustive text-cum-sourcebook, culminating in thoughtful, productive principles for making better towns within their settings.

Sexual Citizens, by Jennifer S. Hirsch and Shamus Khan (Norton, $27.95). The authors, faculty members at Columbia and leaders of its Sexual Health Initiative to Foster Transformation, present their research into sexual assault there, with global implications and applications: “Most of us have never committed assault. But all of us have allowed social conditions to persist in which many young people come of age without a language to talk about their sexual desires, overcome with shame, unaccustomed to considering how their relative social power may silence a peer, highly attentive to their personal wants but deaf to those of others, or socialized to feel unable to tell someone ‘no’ or to give a clear and unambiguous ‘yes.’”

Fast Carbs, Slow Carbs: The Simple Truth about Food, Weight, and Disease, by David A. Kessler, M.D. ’77 (Harper Wave, $26.99). The author, a former commissioner of the Food and Drug Administration, notes that the U.S. government “has played a central role in shaping American agriculture since the nation’s birth.” Unfortunately, despite nature’s bounty, policy choices have led to “products that emerge from huge processing plants,” yielding a “fast carbs” diet of starches and sugar that produce a population “plagued by obesity, heart disease, and diabetes, and incredibly, our food has become the number one cause of these ailments.”

Demagogue, by Larry Tye (Houghton Mifflin Harcourt, $36). Whatever your feelings about “the life and long shadow of Senator Joe McCarthy” (the subtitle), this new biography is of parochial interest for the details about the intersection of the Communist-hunting senator and Nathan Pusey, then president of Lawrence College, in Appleton, Wisconsin (McCarthy’s hometown and base)—and their subsequent clashes when Pusey came to preside in Massachusetts Hall.
historian, and conductor on the Underground Railroad in Philadelphia. “I think this is very moving, and very American in a way, the idea of ordinary people caught up in extraordinary circumstances and describing them in their own plain speech: the most harrowing, incredible, astounding narratives, with suffering and courage and joy and celebration—all these extreme human emotions.” (The work premiered at Carnegie Hall in 2018, and was released on CD this past spring.) The third oratorio in the series is A Nation of Others, set during a single day on Ellis Island in 1921. Originally scheduled to premiere at Carnegie Hall this summer, it has been postponed to November because of the pandemic. “Knock wood,” Moravec says.

Which reminds him of one last thing, regarding the sand in the oyster and the gift of music in an upside-down world. “You know, one thing that’s kind of remarkable: when I play a Bach fugue, my fingers are doing what Bach's fingers did 300 years ago,” he says. “There’s this very physical, visceral connection between me and a past composer, a very great spirit and imagination. And particularly in a time of extreme anxiety and uncertainty and disruption, there’s something grounding about that connection, which has survived world wars and holocausts and genocides and all the horrible things that have happened in the last 300 years. We still have it. And that connection to a tradition and the actual sound”—Moravec pivots to his piano, fingers cascading across the notes—“it’s not an abstract thing. It’s sound waves, and it’s still here. Music is essential to the fabric of who we are as human beings. And even if we're not aware of it, it’s still there.” Like that motif woven through the arias in Sanctuary Road, “it still resonates.”

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SERIOUSLY GOOFY

Comedian Karen Chee finds her voice.

by JACOB SWEET

WHEN KAREN CHEE ’17 was a child, her parents proved definitively that TV was bad for her. During a Jeopardy broadcast, Chee’s mother had her count how many times producers cut to different shots. Each change, her mother said, sapped one’s ability to focus. Chee counted, and the number was astounding. “I was completely convinced by the argument,” she says. In the dentist’s waiting room, she would train her gaze away from the TV, desperate to preserve brain function.

As a writer for Late Night with Seth Meyers on NBC, her fear of television has long faded. Now she often appears herself, mostly on NBC. Her fear of late-night television has long faded. With her grandmother, who was so long, her teacher felt compelled to call home and inform her mom.

Though TV comedy wasn’t a staple of Chee’s childhood, laughter was. “We have a bunch of family members who are very silly, funny people who joke around,” she says. “And so in our house, people laughed constantly.” She remembers sitting in her bedroom, listening to the muffled sound of her parents’ conversation, waiting for her mother’s laugh to cut through.

In eighth grade, Chee discovered comedy. First, it was Whose Line Is It Anyway!, recommended by her drama-class teacher. Then, The Office, pointed out by a classmate. When her brother brought home DVDs of The Colbert Report and The Daily Show from the library, her world changed. “I didn’t know television comedy was a thing,” Chee says. “It felt like my brain had exploded.”

To grapple with the unfamiliar content, she took copious notes. She noticed that each episode of The Office began with a short, off-topic intro and how the show’s writers established each character with a unique, unvarying perspective. When she liked a joke, she’d write it down. She’d look up her favorite shows on the movie database site IMDb, find their writers, and watch other projects they’d worked on: an ad hoc comedy education. She was especially obsessed with late-night television. With her grandmother, she watched David Letterman, Conan O’Brien ’85, and Johnny Carson.

Encouraged by her drama teacher, she also started performing improv comedy. “I was really bad at acting,” Chee says of her early days. “And really bad at improv.” She “broke” constantly, giggling at jokes on stage that were supposed to be taken in stride. But she loved it: the playful atmosphere, the way that improv had rules and a structure, but that all the dialogue was made up. “That was really exhilarating,” she says. “I think
maybe because I was so Type-A, tightly wound, this was the first place I could be like, ‘Whatever you say goes!’

Chee arrived at Harvard knowing that comedy would be part of her college experience. It soon became most of it. Within a few months, she had joined the Immediate Gratification Players improv troupe, the sketch group On Harvard Time, and the satirical news publication Satire V. She hung around people who were always down to goof around. “I never really saw the very serious side of Harvard,” Chee says. “I am sure there are also people who are, like, trying to go to med school, you know what I mean?”

But she took goofiness seriously. Inspired by comedians like Jerry Seinfeld, who marks an “X” on his calendar every day he completes his daily writing task, and Megan Amram ’10, whose prolific tweeting serves as a de facto portfolio, Chee began her own routine. Each morning she’d wake up and write jokes—sometimes for an hour, sometimes until she’d reached 10. At first, they came out excruciatingly slowly, but over time her pace quickened. “It took a really long time,” Chee says. “But it really felt like I was training a muscle essentially or building up a muscle that wasn’t really there.”

As a fan of all sorts of comedic styles, though, it was hard to identify her own comedic voice. To find it, she’d take on others’. One day, she’d wake up as David Sedaris. On another, Tina Fey or Mindy Kaling. She’d spend a day or so writing in each author’s style, and then review her work, searching for common topics. She found that no matter whom she imitated, social and political satire emerged, often focusing on race and gender. So she kept going with that.

In her first piece accepted for The New Yorker, “Why I’m Not Voting,” she takes on the persona of a clueless, capricious woman who invokes Meryl Streep in four of 10 rationalizations. In “Asian Woman Kindly Corrects Bigot with the More Accurate Racial Slur,” on the satirical news site Reductress, she reports on a Korean woman who, when called a racial slur, explains to a racist man that he failed to use the proper one.

Chee’s voice—unflinchingly cheery, happily ironic, socially perceptive—has served her well so far. Frequent freelance writing gigs, internships at the Late Show with Stephen Colbert and Full Frontal with Samantha Bee, and a bountiful Twitter account helped land a role at the 2019 Golden Globes, writing jokes for Sandra Oh. Now, at Late Night with Seth Meyers and in her own stand-up, she has learned to trust her voice—one that has taken a while, and a whole lot of work, to figure out.

“I’m not naturally funny,” Chee explains. “But a lot of it is just trusting yourself. You’re going to have a ton of bad ideas, a ton of bad jokes. You have to do that to get to good ones.”
Clinton’s loss and the #MeToo movement, which emerged about two months after it was published.

Fikry fans were baffled, Zevin reports: “What’s she going on about? This is not heartwarming!” Yet both novels address technology’s outsized impact—the influx of electronic-based reading and the Internet’s indelible record of one’s identity and missteps. The novels also reflect how public/private identities and the nature of perceptions alter over time. Time itself often rises to the level of character for Zevin; at once a transmutable human construct, and an indomitable catalyst. Fikry and Grossman change with age, and ultimately seek forgiveness, acceptance, and kinship. “I write characters who, for one reason or another, have difficulties fitting in with the world; they seem like functional, well-adjusted people, but they all grapple with loneliness,” says Zevin. “People have pointed out to me that I often write biracial characters, head traumas, orphans, and car accidents.”

Strong women, too. In her debut novel Margarettown (2005) a character appears as five different versions of herself over a lifetime. Thematically, it’s somewhat related to Zevin’s screenplay for Conversations with Other Women (2005) starring Helena Bonham Carter and Aaron Eckhart. Directed by Canosa, its savvy retrospective on a failed marriage unfolds through flashbacks and split-screen editing, echoing the way memories play in the mind.

Zevin’s own creative life split that year, when her other early novel, Elsewhere—which evokes Tuck Everlasting, A Wrinkle in Time, and A Christmas Carol with its original time-twisting premise—launched her as a young-adult author. The book is narrated by a dead teenager who finds herself on the island of Elsewhere, forced to live life in reverse. Zevin initially conceived the story as “an after-life love triangle” and fantastical tale for all ages, like The Little Prince. Seven novels later, it now feels as though another person wrote that book, she says, even if she still struggles with its underlying question: “How do we live in a world when it is filled with so much loss?” Elsewhere’s success and Zevin’s “lack of a trust fund” led to Memoirs of a Teenage Amnesiac (2007), and then to developing characters who age into their early twenties for her Birthright trilogy (2011-2013). Protagonist Anya Balanchine is the daughter of a Russian-American crime family, living in a semi-dystopic 2083 New York City—a mix of 1970s urbanism and Soviet-era Russia—where chocolate and caffeine are illegal. “There’s a lot of rationing, love, crime, death, and revenge” amid explorations of young women and power, she says, and “the fact that what is legal can determine what is good and who is good. It probably came out of thinking about the legalization of marijuana.” In March, the trilogy was optioned for television.

Considering how the zeitgeist has crept into her novels, will the tenth one (now under way) integrate aspects of COVID-19? The sudden dissolution of “normal” life reverberates in known and unknowable ways, Zevin allows. It’s a mistake not to view this period as “real time,” she adds: “We have some choice in the way we use it, assuming we’re not desperately ill or desperate for money, so you will either come out on the other side of this having done some things, or having done nothing at all. And, really, life itself is actually like that, too.” All she’ll say about the

A spontaneous photo of Zevin and her late dog Nico taken on a sofa trashed in Los Angeles. “As soon as we were done, a random guy loaded it into his truck.”

Fernanda Baron, of Lowell House, a sociology concentrator with a secondary field in the studies of women, gender, and sexuality, will be the Governor William Shirley Scholar at Pembroke College. Caroline Engelmayr, of Currier House, a classics concentrator, will be the Lionel De Jersey Harvard Scholar at Emmanuel College. Juan Carlos Fernandez del Castillo, of Mather House, a mathematics concentrator, will be the John Eliot Scholar at Jesus College. Bilal Nadeem, of Quincy House, a human developmental and regenerative biology concentrator with a secondary field in global health and health policy and a language citation in modern standard Arabic, will be the Charles H. Fiske III Scholar at Trinity College.

### Cambridge Scholars

Four seniors have won Harvard-Cambridge Scholarships to study at Cambridge University during the 2020-21 academic year.

Fernanda Baron, of Lowell House, a sociology concentrator with a secondary field in the studies of women, gender, and sexuality, will be the Governor William Shirley Scholar at Pembroke College. Caroline Engelmayr, of Currier House, a classics concentrator, will be the Lionel De Jersey Harvard Scholar at Emmanuel College. Juan Carlos Fernandez del Castillo, of Mather House, a mathematics concentrator, will be the John Eliot Scholar at Jesus College. Bilal Nadeem, of Quincy House, a human developmental and regenerative biology concentrator with a secondary field in global health and health policy and a language citation in modern standard Arabic, will be the Charles H. Fiske III Scholar at Trinity College.
David L. Evans to 6 a.m.; now she likes the freshness of preferred white walls, a comfy sofa, bookshelves, and framed art; she is a serious, low-budget collector. A favorite painting, Expo, by Lisa Kramnichfeld, of a woman in an ornate, unisex waistcoat and jacket, hangs behind her simple wooden desk. Zevin likes the artist’s series of women in aggressive stances and “how she makes things that are both very hard and very soft in the poses.” She dislikes the “romanticizing” of writing spaces, and eschews superstitious routines or talismans. “In fact, I’m kind of suspicious of my nice office,” she says, laughing, “like, ‘Are you really necessary?’”

During more than a decade in Manhattan apartments before moving to Los Angeles in 2012, she wrote in a series of “crummy to not-so-crummy places,” without any real privacy even, at one point living, eating, working, playing Nintendo, and hanging out with friends—all on one couch.

Her creative processes morph with each project, but her highly disciplined organizational systems are absolute. Studying art and languages also opens up “new parts” of her brain, although in discussing her daily life in a recent Japanese class, the translation came out as: “I spend a lot of time doing nothing.” She laughs, explaining that discussions on the craft of writing tend to omit the essentiality of thinking. Daily word counts, or using “prompts,” as often advised, are not nearly as vital, in her view, as time spent “just turning the ideas over in my head.” She’s never taken a creative writing course, believing that “the way you studied writing was by reading, and that the sort of technique aspects you would pick up by the doing of it.”

If Zevin and her parents shared any religion at home, it was reading, and that the sort of ‘technical aspects’ you would pick up by the doing of it.”

If Zevin and her parents shared any religion at home, it was reading, and that the sort of ‘technical aspects’ you would pick up by the doing of it.”

**You know, the creative brain has to be a pure brain. The selling brain makes everything disgusting.”**

### The 2020 Harvard Medalists

**The Harvard Alumni Association** has recognized three individuals as the 2020 Harvard Medalists, honoring their extraordinary service to the University. (The actual medal presentation, typically part of the HAA’s annual meeting on Commencement day, has been deferred to a later date.)

David L. Evans, senior admissions officer at the College, retires this summer, following more than five decades of service through which he recruited a widely diverse group of students from across the country, and became a mentor, advocate, and friend for many undergraduates. Evans has advised the Harvard Foundation for Intercultural and Race Relations since 1981, and in 2003, the David L. Evans Scholarship Fund was established for students from underrepresented backgrounds. The Hutchins Center for African & African American Research awarded him the W.E.B. Du Bois Medal in 2016.

Joseph J. O’Donnell ’67, M.B.A. ’71, has held numerous roles at Harvard, including as a member of the Harvard Corporation and the Board of Overseers, and was tapped in 2013 to co-chair The Harvard Campaign. In addition, he has served on the Allston Work Team and on the Harvard College Fund executive committee, and chaired many College and Harvard Business School reunions. O’Donnell attended Harvard on a full scholarship, excelling in football and baseball (he later endowed the baseball-coach position and funded O’Donnell Field). He currently chairs Centerplate, Inc., a nationwide leader in the food-service industry.

Leila T. Fawaz, Ph.D. ’79, the Fares professor of Lebanese and Eastern Mediterranean studies at Tufts, was a member of the Board of Overseers from 1996 to 2012—including a term as president; she also served as an Overseer member of the Harvard Alumni Association Committee to Nominate Overseers and Elected Directors (from 2009 to 2016). In 2012 she was named a Chevalier in the French National Order of the Legion of Honour, and in 2014 she received a Lifetime Achievement Award from the Harvard Arab Alumni Association.
child. The incisive and expressive Zevin kept a journal and wrote short stories and essays; she was hired by the local newspaper as a teen music critic based on her angry letter about a “petty” review of a Guns N’ Roses concert.

At Harvard, though, she retreated. The place felt overwhelmingly stimulating, and yet there was so much she wanted to learn. Concentrating in English, with a focus on American literature, “I wasn’t good at putting myself out there,” she says. Instead she curled into “a cocooned state, intensely reading, intensely thinking but not really showing any external results. And I think what’s hard for people of all ages, but more for young people, is that the creative life is not actually that results-oriented.” Eventually she wanted to learn more about writing through acting, so when she met Canosa, then a nonresident tutor at Cabot House who was working on a campus TV show, she joined the cast.

They took what would have been her senior year off to collaborate on *Alma Mater*, a very low-budget feature film about a gay, tenured Harvard professor set just before the assassination of President John F. Kennedy, the professor’s Weld Hall roommate. Zevin’s father, one of the funders, jokes that the project constituted graduate school. In many ways it did. The stress and creative pressure to develop words outside a theoretical context—words that actors could bring to life in a coherent, actionable story—taught her to take the craft more seriously, and “that you have to empower yourself to do the work, otherwise you’re never going to do the work.”

She graduated the following year, moved to the Upper West Side with Canosa, and subsisted by optioning her screenplays, while also working on theater productions, short films, and other writing projects. And she learned from all of it. In 2001, when her *Berlin* debuted at the Tribeca Playhouse, and September 11 intervened, a fellow artist pointed out that “The work is what matters, and the work stays with you,” she recalls. “And I have since found that to be true. I cannot ask anyone to get the thing I wanted them to get from the work. All I can do is to fully participate in it anyway.”

Facing the current pandemic, she feels “a lot of tenderness about everything and everyone right now.” But social distancing, she notes, “is an interesting opportunity for everyone to hit ‘reboot,’ on whatever things they’ve been longing to do. We are all in the cocoon now, a period of dormancy, and who knows what can come out of that? When I allow myself to feel hopeful, that’s what I think about: that after great change, amazing things can happen.”

As they do in *The Storied Life of A.J. Fikry*. After the aggrieved bookseller’s isolated, intellectual life of books is upended by a mysterious bundle delivered to his doorstep, he ultimately rejoins the larger community, where books and narratives don’t entomb people, but bring them together. Zevin’s message is clear, but not pedantic. “As a reader, I want characters, through time, and I want love,” she says. “Books suggest people beyond yourself, and places beyond where you currently find yourself. The slow contemplation and investment in a life that is not your own. Empathy might be deeply old-fashioned, but show me a better option for living in the world.”

Six years after *Fikry* appeared, the book is slated to become a movie based on Zevin’s screenplay, starring Naveen Andrews (of *Lost*, and *The English Patient*), and directed by Canosa. Amazon, meanwhile, is a more powerful commercial force and the arts as a whole are under even worse threats. Post-pandemic, she now wonders, “Will there be bookstores? Theaters? Movie theaters? Local newspapers? Near my house they’re tearing down the Los Angeles County Museum of Art—to make a better, hugely expensive LACMA that will be smaller?! I’m not against change in general, but the particular timing of this seems ominous. I am a person who is good at solitude—but I like civilization.”

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Centennial Medalists

The graduate school of Arts and Sciences Centennial Medal, first awarded in 1989 on the occasion of the school’s hundredth anniversary, honors alumni who have made contributions to society that emerged from their graduate studies. It is the highest honor GSAS bestows, and awardees include some of Harvard’s most accomplished alumni. The 2020 recipients, announced on May 27, are: Stephen Cook, Ph.D. ’66, a computational theorist and mathematician; Albert Fishlow, Ph.D. ’63, a development economist and historian; Margaret Kivelson ’50, Ph.D. ’57, RI ’66, a space and planetary physicist; and Helen Vendler, Ph.D. ’60, Porter University Professor emerita, beloved Harvard teacher and poetry critic. For more about the honorands, see harvardmag.com/centennial-20.

Graduate School of Arts and Sciences honorands (from left) Stephen Cook, Albert Fishlow, Margaret Kivelson, and Helen Vendler
Overseer and HAA Director Elections

On March 31, the Harvard Corporation and the Board of Overseers announced that the annual voting for new Overseers and elected directors of the Harvard Alumni Association (HAA), ordinarily running from April through mid May, would be postponed until early to mid July because of severe logistical problems imposed by the COVID-19 pandemic. For further details, visit harvardmag.com/divest-slate-20.

Alumni vote by paper ballot or online; the results are usually announced on Commencement day (already postponed). Both the Overseer candidate slate proposed by the HAA nominating committee and the Harvard Forward-backed slate of candidates nominated by petition appear below, in ballot order as determined by lot. Both slates are covered in further detail at harvardmag.com/divest-slate-20; biographies of all candidates appear at elections.harvard.edu.

For Overseer (six-year term):
Nominated by HAA committee

Diego A. Rodriguez, M.B.A. ’01, Palo Alto. Executive vice president, chief product and design officer, Intuit Inc.

David H. Eun ’89, J.D. ’93, New York City. Chief innovation officer, Samsung Electronics, and president, Samsung NEXT

Katherine Collins, M.T.S. ’11, Boston. Head of sustainable investing, portfolio manager of the Putnam Sustainable Future Fund and the Putnam Sustainable Leaders Fund, Putnam Investments

Raphael William Bostic ’87, Decatur, Georgia. President and CEO, Federal Reserve Bank of Atlanta

Susan Morris Novick ’85, Old Westbury, N.Y. Senior vice president, Merrill Lynch; freelance journalist, The New York Times

Tracy K. Smith ’94, Princeton, N.J. Chair of the Lewis Center for the Arts, Berlind professor of the humanities, Princeton University; twenty-second poet laureate of the United States

Miki Uchida Tsusaka ’84, M.B.A. ’88, Tokyo. Managing director and senior partner, Boston Consulting Group

Ryan Wise, Ed.L.D. ’13, Des Moines. Director, Iowa Department of Education; dean-designate, Drake University School of Education

(Diego Rodriguez and Ryan Wise are current Overseers—since 2018 and 2019, respectively—completing the unexpired terms of Overseers who concluded their service early.)

Nominated by petition

Margaret (Midge) Purce ’17, Portland, Ore. Professional soccer player, Sky Blue FC and U.S. Women’s National Soccer Team

Jayson Toweh, S.M. ’19, Atlanta. Program analyst, Environmental Protection Agency

Lisa Bi Huang, M.P.A. ’19, San Francisco. Chief financial officer and vice president of growth, OZE

John Beatty ’11, Seattle. Senior product manager, Amazon.com, Inc.

For elected director (three-year term):
Santiago Creuheras, A.L.M. ’00, A.L.M. ’01, C.S.S. ’01, Mexico City. Senior consultant on sustainable infrastructure and energy, Inter-American Development Bank

Kelsey Trey Leonard ’10, Hamilton, Ontario. Banting Postdoctoral Fellow, McMaster University

Michael D. Lewis ’93, Cambridge. Strategic technology adviser, iCorps Technologies

Mallika J. Marshall ’92, Weston, Massachusetts. Medical reporter, CBS Boston; physician, Massachusetts General Hospital

David R. Scherer ’93, Chicago. CEO and principal, Origin Investments; co-founder, One Million Degrees

Sajida H. Shroff, Ed.M. ’95, Dubai, United Arab Emirates. CEO, Al tamont Group

Benjamin D. Wei ’08, New York City. CEO, Nova Invite

Joyce Y. Zhang ’09, San Francisco. CEO, Alariss Global

Vanessa Zoltan, M.Div. ’15, Medford, Massachusetts. Co-founder and CEO, Not Sorry Productions

Thea Sebastian ’08, J.D. ’16, Washington, D.C. Policy counsel, Civil Rights Corps
The Coronavirus Spring

Existential Q&A. A novel situation, like a pandemic, raises novel questions. For one, is an impeccable university campus still beautiful if no one is around to see it? In search of an answer, Primus walked across Harvard Yard early on March 24, shortly before the Massachusetts order shutting nonessential businesses took effect. In the gray light, the bubbly yellow flowers of Cornus mas (cornelian cherry) showed to particular effect. The venerable cherry in front of Loeb House, where the governing boards govern, was full tilt (and knock-dead beautiful). Across Quincy Street, at Dana-Palmer House, one of the resident wild turkeys grazed, for once unphotographed and undisturbed. As occasional forays thereafter revealed, the apples at the Dean of Students Office made like cotton candy, and Radcliffe’s shadbushes blossomed and ferns unfurled, as socially distanced from passersby as one can imagine.

So, in a word: yes.

And can there be a graduation without Commencement? Also, yes—albeit with way less pomp and circumstance, and far fewer folding chairs: see page 16.

Paradigm shift. A deft explanation of the new order—at least for readers of this column—per this early-April letter from German Uribe ’94, of Guaynabo, Puerto Rico:

Tuesday our youngest came to me and asked, “Papa, what is ‘social distancing’?” I hesitated. How to explain something so terrible. Something that keeps you from seeing your loved ones...Then, I put my arm around her. Looked her in the eye and said solemnly, “Sweetie, it’s as if the whole world got...got Quadded!”

Email bounce. As the world slowed, some people kept busy. In response to the magazine’s regular monthly email to the University list, this message returned:

From: Fauci, Anthony (NIH/NIAID)
Sent: Wednesday, April 22, 2020 11:04 AM
To: Harvard Magazine <harvard_magazine@harvard.edu>
Subject: RE: Here is Your May-June Issue

My work with the Coronavirus Task Force and the large volume of incoming emails precludes me or my staff from answering each individual message. I would encourage you to visit www.coronavirus.gov for the latest information and guidance related to COVID-19.

Thank you, and best regards.

Anthony S. Fauci, M.D.

Dr. Fauci, S.D. ’09, was honored 11 years ago for his leadership in combating HIV/AIDS. His citation read: At the helm, on the Hill, in the lab, on the ward, a preeminent investigator of human immunology and a tireless leader in striving to conquer the world’s most insidious ills. And how: When he becomes less busy, the good doctor is in line for a truckful of further honorary degrees; if Harvard wants to double up for this extraordinary second service, who would object?

Resonant number. The Harvard Alumni Association had to move its spring board meetings to Zoom. Participants could join the plenary session via an impenetrable link: https://harvard.zoom.us/j/99751098622?pwd=Z1c1ak9EbjZFVnQwTjZ1M1FwDhvUT09.

But in a deft move by an HAA staff member, the password was much easier on the Crimson cerebrum: 1636. —Primus

Mr. university. Richard M. Hunt, a faculty member in social studies for more than four decades and University Marshal for two, died peacefully on April 10, at age 93. The Harvard Gazette appropriately remembered him as “a respected teacher, statesman, and keeper of [Harvard’s] storied history.” If there is one memory to cherish among thousands it is the image of the joyful Hunt celebrating, personally and officially, the conferral of an honorary degree on Nelson Mandela during the extraordinary ceremony in Tercentenary Theatre in September 1998. A sterling representative of Harvard, at one of its best moments.

Photograph by Jim Harrison

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LETTERS (continued from page 7)

ical thinking, both crucial building blocks of democracy, alternative school options, including homeschooling, must be encouraged.

Two big thumbs down to Bartholet’s ban!

SHEILA GREEN ‘85
Oakdale, Calif.

HEALTHCARE COSTS


Why do shared savings programs barely reduce costs? Controlling diabetes is a universal element of these programs, but prevents complications 10 to 20 years in the future. These programs share savings when a population achieves collective clinical metric thresholds under care by numerous professionals. This muddies the incentives for individuals. I have never seen data that pegs these thresholds to better health in the population. Rather, the metrics are really financial goals for the insurer, masquerading as clinical achievements.

Furthermore, good diabetic management requires using a growing number of ever more expensive medications. Better long-term clinical outcomes come at a short-term cost, and perhaps marginal if any short-term savings. Shared savings programs won’t connect a leg not amputated in 2035 to decisions made in 2020...assuming the patient even has the same insurer.

I further invite Cutler’s comments regarding the social determinants of health (SDOH). Studies attribute 20 percent of health to health care, 20 percent to genetics, and 60 percent to the quality of housing and education, transportation, food security, utilities, access to care and exposure to violence. Rush University has incorporated a SDOH screening tool in its electronic medical record. Busy health-care professionals maintain SDOH is a societal issue outside their purview, so Rush and others have established partnerships with government agencies and community nonprofits to address SDOH.

Rush has seen decreased Medicare readmissions and bed-day utilization among Medicare high utilizers. Health care costs depend on far more than health care alone.

Cutler correctly says that reducing American health care costs requires a coordinated,
whole-system approach. “Fixing” health care will help, but as a society we must align incentives and address all factors that affect our health.

Donald R. Lurye ’75, M.D., M.M.M., CPE
Past president and board chair; Illinois Academy of Family Physicians
CEO (ret.), Elmhurst Clinic, LLC
Elmhurst, Ill.

Having spent almost 20 years in senior governance positions in a large, integrated not-for-profit healthcare system, I can affirm the opportunities David Cutler cites for cost reduction: administration, greed and gouging, and [being] in love with medical services. To those I would add efficiency, both in delivery and in operations.

But there is another facet to the high cost of health care: intensive lobbying by hospitals and the American Hospital Association, doctor groups, and the American Medical Association, and of, course, insurance and pharmaceutical companies. Whether it is in the hundreds of millions, or billions, of dollars, it has been, and is, relentless and aimed at the entire political spectrum. The purpose of this lobbying is, plain and simple, to protect the income and profits of its clients.

During my time in health-care governance, I heard a physician state at a conference, “American health care is the biggest cottage industry in the world.” Despite consolidations among hospitals and doctor groups, our health care is still highly fragmented. State regulation of insurance companies doesn’t help, either. While Obamacare made progress in covering the uninsured, there is a long way to go for universal coverage. Germany, by the way, has had universal health care since the time of Bismark.

The paths to healthcare reform, both in cost reduction and toward universal coverage, are strewn with many roadblocks, both political and financial. My fear is that in trying to rectify these problems we as a country will try to fix everything at once. A step-by-step approach is more likely to meet less resistance and to gain acceptance as we go along. Let us hope.

Anthony C. Leonard ’59, M.B.A. ’66
Guilford, Conn.

ST. LOUIS, REINTERPRETED

Thanks to Marina Bolotnikova for her article on Walter Johnson’s book about St. Louis (“From Lewis and Clark to Michael Brown,” May-June, page 33). My wife and I lived, worked, and raised a son and daughter there from 1947 to 1966. I remember all too clearly how uncomfortable it was, as a white math teacher at a classy white prep school, to lead white students through a crowd of extremely well-dressed, very polite black men and women, quietly protesting the St. Louis “custom” of restricting blacks to the upper balcony for orchestral or opera performances.

From 1949 to 1953, we lived in the suburb of Webster Groves, where a beautiful swimming pool had just been finished. It was funded by white and black taxpayers. But white taxpayers said their kids were not going to swim in a pool with black kids, even though the law said they could and should. The town fathers caved in and decided, despite summer temperatures close to a humид 100 degrees, to shut down the pool. In desperation I wrote a letter to the St. Louis Post-Dispatch lamenting the damages of such a bad decision. Wow! The hate mail started to fill my mailbox. “You must be a n*****,” one writer said, “or a mulatto, which was even worse!”

That led to an invitation for me to speak at a meeting of the Benevolent and Protective Order of Elks. As I again made my plea, several angry members of the group stormed out.

Meet me in St. Louis? Lemme think it over.

Dawes Potter, A.M. ’47
New York City

Thank you for the article. I have mailed it to friends and ordered a copy of Walter Johnson’s important book.

My Harvard class held a mini-reunion in St. Louis a few years ago. We were wine and dined and told the great history of the city. Nothing was said about St. Louis’s racist legacy. It was a wasted opportunity.

The Reverend Fred Fenton ’58
Seal Beach, Calif.

WHAT COUNTS

The excellent opinion piece, “What Counts” (May-June, page 5), makes clear the limitations of faculty governance in the Faculty of Arts and Sciences. Many if not most other universities, like Stanford, where I now teach, have a faculty senate or council that includes elected representatives from each school. At Stanford, the Faculty Senate has worked well since 1968 to consider and vote on substantive policy issues, and operates collaboratively with the university administration. There is no way an entire FAS faculty of well over 800 members could operate so effectively. It seems past time for FAS, if not Harvard, to consider a similar body.

Thomas Ehrlich ’76, LL.B. ’79
Palo Alto

“What counts” brought to mind an observation I read in Harvard Magazine years ago and have never quite forgotten: a statement by the late Professor Samuel Beer (whose Soc Sci 2 class was a highlight of my freshman year).

My memory may not be 100 percent correct, but his words went pretty much like this: “The Harvard faculty, as with any legislative body unfettered by party discipline, can always be counted on to muster a majority against any meaningful proposition.”

Perhaps you can imagine the multitude of times I remembered this wisdom—pertinent way beyond Harvard—while sitting (suffering) through faculty meetings at the university at which I served for many years.

Ken Manaster ’63, LL.B. ’66
Professor of law, emeritus
School of Law, Santa Clara University
Santa Clara, Calif.

BREAKTHROUGH ASTRONOMER

Donovan Moore writes, about Cecilia Payne-Gaposchkin (Vita, May-June, page 38), “By looking down through a jeweler’s loupe, Payne was able to do what centuries of astronomers had tried to do by looking up through telescopes: determine what stars are made of.” But he oversimplifies here (and in the prologue of his recent biography) to the point of incorrectness, since the breakthrough by “Mrs. G.” (as we called her) was in applying recent theory on how those spectral lines on the photographic plates were formed to her own measurements, not merely by looking at the plates themselves.

It took some observational work by another young researcher, Donald Menzel, and theoretical work by Henry Norris Russell to overturn long-held beliefs that the stars’ elemental abundances were similar to Earth’s. Russell’s hesitancy on CPG’s 1925 conclusion that hydrogen dominates the stars, and later assumption of credit, would probably have been the same for a male graduate student’s thesis. When Menzel became director of the Harvard Observatory in the 1950s, he promptly arranged for Payne-Gaposchkin to be promoted to professor and doubled her salary.

Jay M. Pasachoff ’63, Ph.D. ’69
Field Memorial Professor of astronomy
Williams College

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“FROM NEITHER HERE NOR THERE” (continued from page 35)

Gonzales still winces at those words.

“FROM NEITHER HERE NOR THERE”

Rockies, the seat of one of the most conservative urban counties in the country. As a child, he and his sister were mostly raised by his mother, who often held two or three jobs to keep the household afloat. “She had a very keen understanding of inequality,” Gonzales says. “She taught me to hate injustice.” Meanwhile, he played football. He was small and wiry, but fast, and as a high-school running back, promising enough to attract attention from college recruiters. But in the last game of his senior year, he blew out his knee, and the injury ruined his hopes of an athletic scholarship. “It was devastating at the time,” he says. He applied to colleges more or less randomly after that. “A working-class kid—I was just trying to figure out how to navigate.” But his grades were good, and when nearby Colorado College offered financial aid, he enrolled.

Almost immediately, he was drawn to sociology. There was something profound about being able to discern structures and patterns in the jumbled complexity of human society, to put words and names to lived realities that often went unexpressed or unexamined. Sometimes, he found himself disquietingly reflected in the field’s taxonomy, but there was appeal in that, too: “It was in some ways really empowering, and in other ways kind of scary. I was looking at my life through the lenses of a textbook: poor, working class, single mom, person of color, all these things.”

During his junior year, in 1991, Gonzales took part in an urban-studies program in Chicago and spent a few months interning at a settlement house on the city’s west side. He tutored kids, played sports with them—“Anything that I could do. I would go anywhere I was needed.” The surrounding community was predominantly Mexican, Puerto Rican, and Polish, and he loved being there. After the internship ended, he stayed on for several extra weeks. (Afterward, he spent part of the summer working at a small island resort in Maine, an experience that hammered home a lesson about the gulf between rich and poor. When a hurricane hit that August, downing trees and knocking out electricity, the resort tried hard to make sure its guests were never inconvenienced. “So there we were, day after day,” Gonzales remembers, “trying to seamlessly serve breakfast, lunch, and dinner to these very wealthy families after this huge, devastating storm. We were washing dishes in the lake.”)

After graduation, he returned to Chicago as a full-time youth worker and stayed for 10 years. It was there, he says, that he began to see how powerfully immigration status affects children’s lives. In Colorado, he’d known plenty of Mexican Americans, but, like him, they mostly were third- and fourth-generation citizens. In Chicago he kept seeing neighborhood kids hit dead ends. Without legal immigration status, it was hard—or impossible—to build productive lives. Gonzales and his colleagues were at a loss. “People were really blind to this,” he explains. “We were seeing this growing demographic come of age right in front of us, and there was no academic work at the time, no evidence base informing best practices on how to help these kids. So, teachers, counselors, social workers, healthcare professionals, community institutions—we were really powerless. There were so many stories of young people in our program dropping out of school because they’d become too disillusioned. And then some of them would just disappear.”

One was a boy he calls Alex. Gonzales met him when he was seven and his family—Mexican mom, Guatemalan dad, and an older brother—had been in the United States for four years. Chicago was the only place Alex remembered. He had a talent for art, and as he grew up, Gonzales and his colleagues supplied him with paints and sketchbooks, enrolled him in classes. Eventually, they made plans to help him attend a private high school for the arts and raised a semester’s worth of tuition to get him in the door.

That’s when everything went wrong. Filling out the application for admission at his family’s kitchen table, Alex hit his waking-to-a-nightmare moment: he had no Social Security number. Before then, it had never fully dawned on him, Gonzales says, that he, like his parents, was undocumented. The next few days were filled with panic. Gonzales wrangled a sit-down with the school’s admissions office, but midway through that meeting, with Alex’s portfolio sprawled out across the desk, they began asking questions: “Are you telling us this boy is an illegal Mexican?” Gonzales still winces at those words. He did his best to answer, “but it was clearly hopeless.”

After that, Alex unraveled. Angry and disillusioned, he withdrew. During his first semester at the neighborhood high school, he found out that he wouldn’t be able to take driver’s education with his classmates and left school not long afterward. He started hanging out with guys from a local gang, and then one afternoon, as he was walking down the street with a friend, three men in masks jumped out of a van and shot him dead.

Gonzales was deeply shaken. “It just really….” He pauses. “It took a toll on me. In the days and months that followed, he struggled to understand what had happened. Looking for answers, he found his way back to sociology.

“It became their identity”

He had one foot in academia already. For three years, he had been taking night courses at the University of Chicago to earn a master’s in social work. He’d also started teaching classes on youth immigration in the same urban-studies program that first brought him to Chicago. Then, at 32 years old, he headed west, to a doctoral program at the University of California, Irvine.

His dissertation fieldwork began almost as soon as he arrived, and almost by accident. Restless in the suburban placidity of Irvine, he ventured out to Santa Ana, a community that felt more like those he’d known in Chicago: Latino, lower-income, lots of immigrants. Volunteering at a social-service agency that specialized in second chances for kids pushed out of the system, Gonzales started hearing about students who were undocumented. “And their stories were eerily similar,” he says. “They had moved to California with their families at six months old, or two years old, five years old.” They’d grown up in local neighborhoods, were educated in local schools alongside American-born friends, took part in summer camps and after-school sports. “And then, at a pivotal time in their lives—14, 15, 16 years old—they were hitting a wall…. You could watch them suddenly arrive at this understanding of themselves as undocumented immigrants, and the stigma...
All at once, his research had focus and urgency. Gonzales began spending time in social-service agencies across Los Angeles, volunteering in after-school programs, tutoring programs, church groups, men’s groups. He got to know community workers, teachers, parish priests. He talked to parents, families, kids. “I wanted to establish myself as somebody who was giving more than I was asking for,” he says. “In Chicago, I had seen a lot of research relationships gone wrong.” For many of the subjects who ended up in his dissertation, he let a full year pass before turning on a tape recorder.

He earned his Ph.D. in 2008, but the project continued for another six years. “I was just keeping in touch with people,” he says. “And I was hearing some horrific stories. And so I just kept scheduling interviews.” He joined the faculty at the University of Washington, and then the University of Chicago. In 2013, he arrived at Harvard, with a manuscript under way. By the time Lives in Limbo was published three years later, American political rhetoric had taken a sharp turn against immigration.

In his current research, Gonzales has been thinking about place. “More so than ever, where one lives matters a great deal,” he says: it can mean vastly divergent legal and social landscapes, the difference between having access to public transit or having to drive an hour for social services. “And layered on top,” he says, “you have legacies of embracing immigrants, or legacies of segregation and hostility.” In the absence of federal immigration reform, states, counties, and municipalities formulate their own responses. Some declare sanctuary cities and allow driver’s licenses and in-state tuition for undocumented immigrants; others pass anti-sanctuary bills and ramp up cooperation between local law enforcement and U.S. Immigration and Customs Enforcement (ICE), the federal agency that carries out deportations.

Gonzales and several colleagues are conducting a study on educators’ responses to the current political moment: how they deal with immigration issues bubbling up in classrooms. One goal is to identify the best practices that eluded him and others 20 years ago in Chicago. “We’re still in the early stages, but we’re learning that best practices look very different across the country.”

The researchers have visited school districts in the suburbs of Chicago and in south Texas, near the Mexico border. Last year they headed to a rural district in Georgia to talk with administrators about the study. “And they told us, ‘We don’t have immigrants in our schools.’” When Gonzales pointed to local statistics on foreign-born students and families, “they said, ‘Oh, you mean the Hispanics.’...Now, this is an interesting thing. My interpretation is that it’s a way for them to support their students but also still be aligned politically with a rhetoric that is anti-immigrant. If you have this disconnect, this dual reality, then they’re not really immigrants. These are our students.” It reminds him of recent news stories describing the shock some conservative voters felt at seeing the harsh immigration policies they’d supported being enforced against undocumented people they knew, pillars of their own communities. “It’s fascinating,” Gonzales says. “You boil this down to individual stories, and it’s not really them. It’s people.”

“I am from uncertain futures”
Every fall, Gonzales teaches a course called “Contemporary Immigration Policy and Education Practice,” drawing in part on his research into the forces that shape young immigrants’ lives. It’s a popular class, open to undergraduates as well as graduate students. Last year, Andrew Perez ’20 was one of a dozen or so from the College who signed up. A U.S. citizen who is the son of Mexican immigrants, Perez grew up in a mixed-status family, his own version of living in-between.

In last fall’s class, the first day’s assignment was for each student to write what Gonzales calls a “home poem,” modeled after Kentucky poet George Ella Lyon’s “Where I’m From” (her first three lines: “I am from clothespins, / from Clorox and carbon-tetrachloride. / I am from the dirt under the back porch”). “It’s a poem that identifies the speaker in a particular place and culture and time,” Gonzales says. He makes this same assignment on the first day of every course he teaches. He always writes one, too. Then at the end of class, they all read aloud what they’ve written. “Ima makes us all vulnerable together, and people find commonalities—culturally, linguistically, in family history. It speaks really powerfully to who our students are, where they come from.”

That assignment meant a lot to Perez. “People have such complex lives,” he says. “And everyone has their story.” He keeps his own poem stored on his phone, alongside photos of his Harvard roommates, his twenty-first birthday, a cousin’s quinceañera, two childhood friends recently lost to suicide, his young nephews in their Harvard T-shirts and hats. Now he reads it aloud again, his voice thickening as he reaches the last two stanzas:

I’m from wrinkled faces that ask if I have eaten
Who want to see me but are scared of planes
I’m from family that has left and stayed
And who I hope will welcome me back

I am from uncertain futures but hopeful spirits
I am neither and both from there and from here
And one day I will be home

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Associate editor Lydialyle Gibson most recently profiled political scientist Pippa Norris; see “The Authoritarian Reflex,” in the March-April issue.
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Air Mail

A wartime life together—cut short

On February 23, 1944, Lt. Harriet D. Adams of the Army Nurse Corps, stationed at Will Rogers Field in Oklahoma City during World War II, penciled into her diary, “It’s a queer thing but all nurses get in to the movies free on this post. Nice.” Under that, in ink, she added, “Met Bob Earhart at the movies tonight.” Two months later, she and Robert H. Earhart, then a lieutenant in the Army Air Forces, were married. By June, he was en route to southern Europe as an aerial reconnaissance pilot with the 12th Air Force, 3rd Photo Group, 23rd Photo Recon Squadron, a “Photo Joe” flying missions over enemy territory, armed only with a fuselage-mounted camera. When they parted, they had never seen each other in public in clothes other than their uniforms.

In letters home, written almost every day, Bob Earhart sought to reassure his wife about the safety of his missions spying on German troops and equipment from a Lockheed “Lightning” P-38. “They say these damn Germans are pretty fair flyers,” he wrote. “Oh hell, they don’t stand a chance against my P dash three eight.” He regarded his futuristic twin-engined plane as a kind of talisman to ward off bad luck, but his letters also detail narrow escapes from death, such as when he had to pump down his landing gear by hand when the plane’s hydraulic system failed over water, 75 miles from shore.

Harriet and Bob Earhart’s letters—now held at Radcliffe’s Schlesinger Library—clear the haze of nostalgia from both battlefield and home front. After Bob left for Europe, Harriet discovered she was pregnant and gave birth to their son, Robert, without her husband by her side. Army regulations forced her to give up her military career. “That shedding of army uniform and ways was pure unadulterated hell,” she wrote to her husband. “I heard everywhere that nurses had no business having babies at times like this.” Both husband and wife fretted about what his return would bring and what their postwar plans would be.

But there would be no postwar life together for the couple. On March 24, 1945, Captain Robert Earhart’s P-38 crashed near Florence, Italy; he died three days later. Harriet would not learn of his death for days, so she kept on writing to him. On the day he died, she wrote about a dream she’d had in which “as soon as you walked through the door you vanished.” He won the Purple Heart and a Distinguished Flying Cross, but his widow had to spend years trying to get a military marker for his grave in his home-town of Pipestone, Minnesota. Seventy-five years after the war’s end, their love is evergreen in this cache of letters and personal objects, purchased from an ephemera dealer, which mysteriously arrived at the Schlesinger bound in white ribbons.

—BLYTHE GROSSBERG

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